

**THE EXPERIENCE OF IMMIGRANT AFRICAN MOTHERS ENGAGING IN
REPRODUCTIVE HEALTH EDUCATION WITH DAUGHTERS AGED 10–14 YEARS**

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Mothers providing daughters with reproductive health education (RHE) has been associated with decreased adolescent sexual risk-taking behaviors, sexually transmitted infections (STIs), and teen pregnancies. Studies from African countries indicate daughters prefer to receive RHE at an earlier age. However, a review of RHE studies in African countries reveals mothers are reluctant to provide RHE due to religious and cultural beliefs, mother's education level, and lack of adequate communication techniques. African immigrants in the United States are a fast growing and underrepresented population, in terms of immigrant health research and public health services. It is unclear how they negotiate their new cultural context or how they are influenced by American culture with respect to providing RHE to their children here. To date, most research on immigrant RHE has focused on Hispanic and Asian populations. No studies have examined the experiences of African immigrant mothers related to providing RHE to their adolescent daughters. The specific aims of this study were to 1. Describe the experience of African mothers living in the United States in providing RHE to daughters ages 10–14 years; 2. Describe timing, content of education and socio-cultural context that influence mother-daughter RHE; 3. Explore women's perceptions of how moving to the United States has changed their ideas about speaking to their daughters about reproductive health. A qualitative descriptive approach was used. Twenty African immigrant mothers with daughters aged 10–14 years from Pittsburgh, Pennsylvania, completed a demographic questionnaire and interview. Twenty-five subthemes emerged. Three major themes were developed from the subthemes: (1) mothers' RHE

experiences, (2) mothers' RHE conversations with their own daughters, and (3) mothers' perception of RHE change due to living in the United States. The mothers received little to no RHE from their own mothers. Scare tactics, myths and taboos were used to deter adolescent sexual risk behaviors. Mothers provided RHE, mostly triggered by reported behaviors of their daughter's friends. Understanding the experience of African immigrant mothers engaging in RHE will potentially help in designing more culturally appropriate RHE programs for African immigrant mothers and their daughters, to decrease adolescent sexual risk behaviors.

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PREFACE

I am grateful to my family, friends, and committee for their support. I am also thankful to the African immigrant community, and to the mothers who took time to participate in this study.

1.0 INTRODUCTION

Most research on mother-daughter reproductive health education in the United States has targeted Caucasian and African American populations; among immigrant communities, this research has examined Hispanics and Asians, not taking into account the over 1.7 million African-born persons in the United States. There are no national statistics on rates of teen pregnancy and STIs in the African immigrant adolescent female population; however, teen pregnancy has been revealed to be a significant concern in the African immigrant community in Pittsburgh, Pennsylvania (Union of African Communities in SouthWestern Pennsylvania, 2009).

Studies in African countries and in the United States report sexual debut occurring in the early adolescent years, from as young as 10 years (Adu-Mireku, 2003; Cavazos-Rehg et al., 2009; Childs, White, Hataway, Moneyham, & Gaiosio, 2012; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Mathew, Shugaba, & Ogala, 2006). Early sexual debut can lead to teen pregnancy, sexually transmitted diseases, and sexual risk behaviors such as unprotected sexual intercourse, sexual activity while under the influence of drugs or alcohol, and multiple sex partners (Childs, White, Hataway, Moneyham, & Gaiosio, 2012).

Reproductive health education includes education on human sexual anatomy, sexual reproduction, puberty, sexual relationships, abstinence, and birth control. This education has been shown to be effective in decreasing unprotected sex, delaying sexual debut, decreasing the number of partners, reducing incidences of sexual intercourse, and increasing condom use

(Kirby, 2007; Kirby, 1999; Kirby, Obasi, & Laris, 2006). This education does not encourage teenage sexual activity nor does it lead to early initiation of sexual activity (Dreweke, 2007).

Mothers are gatekeepers to reproductive health education (Amoran, Onadeko, & Adeniyi, 2005; Mbugua, 2007). Adu-Mireku (2003) and Biddlecom, Awusabo-Asare, and Akinrinola (2009) found that mother-daughter communication about sexual health reduced adolescent sexual risk behaviors that may lead to teen pregnancy and/or STIs. Research also indicates that the ideal time to provide reproductive health education is before sexual activity is initiated (Izugbara, 2008; Wilson, Dalberth, Koo, & Gard, 2010). Mother-daughter reproductive health education also increases adolescent knowledge about sexuality (Miller & Whitaker, 2001).

Daughters are reportedly more comfortable talking to mothers about reproductive health issues and prefer to receive reproductive health education from mothers starting at a median age range of 10 to 14 years (Crichton, Ibisomi, & Gyimah, 2012; Mathew, Shugaba, & Ogala, 2006; Opara, Eke, & Akani, 2010; Wilson, Dalberth, Koo, & Gard, 2010). However, no studies have examined exclusively how African immigrant mothers in the United States provide reproductive health education to their daughters. African immigrants construct and inhabit socio-cultural contexts that are distinctly different from those of the native African-American population, which may influence how African immigrant mothers engage in reproductive health education with their daughters. Acculturation, the process of cultural and psychological change that occurs as a result of contact between two or more cultural groups, may also play a role in the process.

1.1 PURPOSE AND SPECIFIC AIMS

The purpose of this qualitative study was to describe the experiences of African mothers living in the United States related to providing reproductive health education to their daughters aged 10–14 years. In particular, the study targeted the effects of acculturation, timing, content, and socio-cultural contexts on the process. Results from this study contribute to the currently underdeveloped knowledge base surrounding reproductive health communication between African immigrant mothers and their daughters, the ages at which communication begins, and the content of the discussion.

Specific Aims

The aims of this qualitative descriptive study were as follows:

1. To describe the experience of African mothers living in the United States in providing reproductive health education to daughters aged 10–14 years;
2. To describe the timing, content of education, and socio-cultural context that influences mother-daughter reproductive health education;
3. To examine African women's perceptions of how moving to the United States has changed their ideas about speaking to their daughters about reproductive health.

Definition of Terms

The following definitions apply to terms used in this dissertation:

1. **Experience**—the mother's feelings, thoughts, judgments, attitudes, and beliefs that emerged as a result of engaging in reproductive health communication with the daughter.

2. **Reproductive health education**—information provided by mothers to daughters on the topics of human sexual anatomy, sexual reproduction, puberty, sexual relationships, abstinence, and birth control.
3. **Timing**—situational triggers (e.g., TV advertisement and beginning of menses), age, and setting (e.g., at home) in which a mother provides reproductive health education to her daughter.
4. **Socio-cultural context**—the set of beliefs, traditions, and moral values of African immigrant mothers, especially regarding reproductive health education.

1.2 BACKGROUND AND SIGNIFICANCE

1.2.1 Continent of Africa

Africa is comprised of 55 countries (Figure 1). It is the world's second largest and second most populous continent. According to estimates, over 2,000 languages are spoken in Africa. Languages used by the particular government of a given African country to conduct business include English, French, Portuguese, Spanish, Arabic, Amharic, and Swahili. Twenty countries list English as one of their official languages (Ouane & Glanz, 2010). Approximately 45% of the population is Christian, 40% Muslim, and less than 15% follow traditional African beliefs (Opong-Mensah, nd). Because of the extreme difficulty in producing study materials in the numerous African languages spoken by the study population, the study was conducted in English.

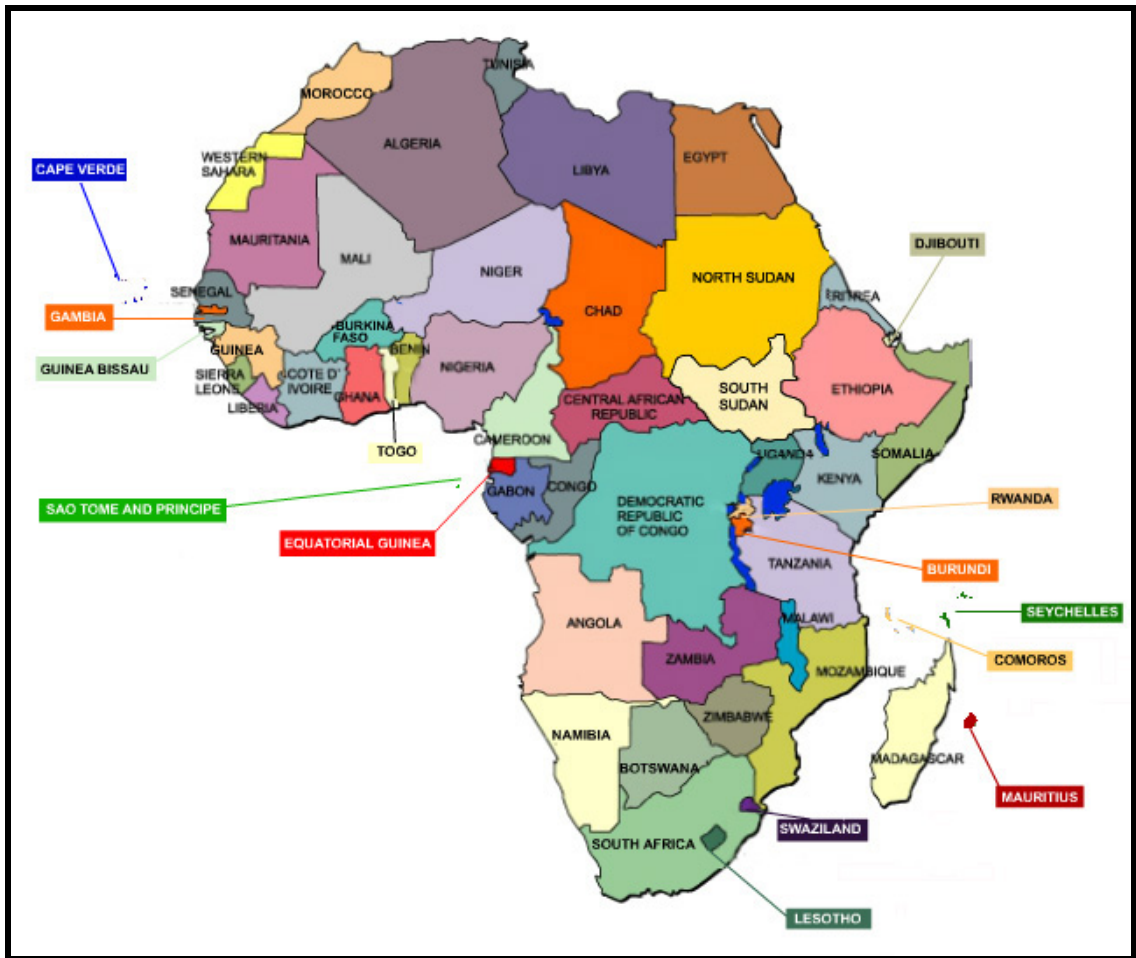


Figure 1: Continent of Africa

1.2.2 Profile of African immigrants in the United States

In the 1960s and 1970s, many Africans came to the United States to pursue higher education but not to settle permanently (Takougang & Tidjani, 2009). These Africans attended school in areas with large concentrations of higher-education institutions such as New York, Washington, D.C., Houston, Atlanta, Chicago, Los Angeles, and Boston (Takougang & Tidjani, 2009). African immigrants were sponsored by their governments and were expected to return to engage in nation building activities. A large cohort of those who returned now holds key positions in their

respective economies. Some key positions include teaching in African colleges and universities and involvement in politics (C. Agbemenu, personal communication, May 24, 2013).

Today, Africans are one of the fastest growing groups of immigrants in the United States, with immigration increasing over 200 percent in the 1980s and 1990s and nearly 100 percent during the 2000s (Capps, 2011). Approximately 1.7 million African immigrants reside in the United States, making up about 4% of the foreign-born population (U.S. Census, 2011). According to a report by the Migration Policy Institute, African immigrants to the United States originate mostly from West Africa and other English-speaking countries (Capps, 2011). Over 75% of these immigrants are from sub-Saharan African countries. African countries with the greatest number of immigrants to the United States include Nigeria, Ghana, Kenya, and Ethiopia (U.S. Census, 2011).

Nearly half of the African immigrants in the United States are naturalized U.S. citizens. Seventy-five percent speak English, 40% have at least a bachelor's degree, and more than a third work in professional jobs (Immigration Policy Center, 2012). African immigrants have settled in populous states such as New York, Texas, California, Georgia, Florida, North Carolina, and Pennsylvania (Takougang & Tidjani, 2009). Large numbers of African immigrants have also settled in Minnesota and Washington. African immigrants tend to settle in urban areas on arrival to the country and, once settled, move to suburban areas (Capps, 2011).

1.2.3 Adolescence

The World Health Organization (WHO) defines adolescence as the period of growth after childhood and before adulthood, from ages 10–19 years. Adolescence is driven by biological processes that lead to physical and sexual maturity (WHO, 2013). Adolescence is also

characterized by great cognitive, social, and emotional changes (WHO, 2011). During this period, there is movement from a one-sided child-parent authority relationship to one of cooperative negotiation. In healthy families, the adolescent continues to seek parental guidance and is receptive to parental influence (Morris & Steinberg, 2001). The period is divided into early and late adolescence. Early adolescence spans age 10–14 years, and late adolescence 15–19 years.

1.2.4 Adolescence in girls

In girls, adolescence is biologically marked by the onset of puberty that begins 2 years before menarche. Overweight and obese girls typically experience menarche earlier (WHO, 2011). The first visible sign of puberty is the development of breast buds, typically at age 10–11 years, followed by pubic hair (Pinyerd & Zipf, 2005). Marshall and Turner (1969) proposed a five-stage scale to describe the onset and progression of pubertal changes. Stage one is the prepubertal period, with no development of sexual characteristics. In stage two, breast buds emerge; there is enlargement of the areola and the appearance of sparse, long, lightly pigmented pubic hair. Breast tissue becomes more elevated in stage three. Pubic hair is adult in type but covers a smaller area. In stage four, there is an increased breast size and elevation, pubic hair is adult-like in quality and extends across the pubis only. By stage five, breast development is complete, and pubic hair is adult in quantity and type (Marshall & Turner, 1969). The transition from prepuberty to full reproductive capacity can occur in as little as 18 months or take as long as 5 years. (Christie & Viner, 2005).

In the United States, non-Hispanic black girls were found to be significantly younger at puberty and menarche than other studied populations, with a median age of 10 years at puberty,

and 12.06 years at menarche (Biro et al., 2006; Chumlea et al., 2003). As a whole, only 10% of girls in this study sample started to menstruate before 11 years, and 90% of all U.S. girls were menstruating at 13.75 years (Chumlea et al., 2003). In a recent conversation with the author of this dissertation, a group of 22 African mothers reported that their daughters had developed breast buds at a mean age of 9.7 years (age range 8–11 years) and menarche at a mean age of 11.7 (age range 8–16 years) (personal communication, group of African mothers, July 25, 2013 & August 27, 2013).

1.2.5 Reproductive health education in pre-colonial Africa

According to historical accounts from some African societies, before colonization and the introduction of Christianity, children were socialized for their adult responsibilities as they approached puberty (Mbugua, 2007). This socialization included education about sex. Because it was considered taboo for sex to be discussed between immediate family members, this sex education was taught by grandparents. Grandparents were responsible for teaching young people about husband-wife expectations and sexual behavior. For example, young people in Kenyan and Ghanaian traditional societies took part in initiation rites, after which they were considered adults and were free to marry. During initiation rites, initiates received more in-depth sex education through the use of sexually explicit language and dances (Mbugua, 2007). These actions were guided by a strict moral code. Young people married shortly after initiation rites, reducing the potential for unwed pregnant girls (Kayongo-Male & Onyango, 1984; Zabin & Kiragu, 1998).

With the introduction of Christianity, many traditional coming-of-age rituals were eliminated. An example is Kenya, East Africa, where missionaries arrived in the 1800s. The missionaries were extremely conservative in dress, language, and dance; their behavior

conflicted with the indigenous practices they encountered in such a way that African cultural practices were denounced and began to decline (Mbugua, 2007). Christian/European practices were increasingly incorporated into local culture, resulting in adolescent girls being less likely to be involved in initiation rites, and their parents, extended family, teachers, and other adult role models became more uncomfortable teaching the girls responsible sexual behavior (Mbugua, 2007; Nganda, 2008; Ojwang & Maggwa, 1991; Zabin & Kiragu, 1998). African society today increasingly subscribes to Christian religious beliefs, particularly Catholicism. This dominant religious perspective condemns the use of contraception and condoms for safe sex practices (Nganda, 2008).

1.2.6 Review of mother-daughter reproductive health education in African countries from 1980 to the present

The way in which reproductive health education was provided in the pre-colonial period contrasts with how it was (and is) provided from the 1980s to the present. In the pre-colonial period, reproductive health education was more liberal and more explicit (Kayongo-Male & Onyango, 1984; Mbugua, 2007; Nganda, 2008). However, as a result of the introduction of Christianity, increasing urbanization, education, and changes in family living situations and family dynamics, reproductive health education has become more conservative in present-day Africa (Izugbara, 2008; Mbugua, 2007; Wamoyi, Fenwick, Urassa, Zaba, & Stones, 2010).

In this section, studies examining mother-daughter reproductive health education in African countries are discussed. Moreover, studies from 1980 to the present are reviewed to compare and contrast pre-colonial reproductive health education with the reproductive health

education of this more recent period, which coincides with that of increased African immigration to the United States.

No published studies of African countries that exclusively targeted the reproductive health education mothers provided to daughters aged 10–14 years were identified. As such, in concert with the specific aims of this study, this section reviews studies of reproductive health education between African mothers and their daughters in the 10–14 year age range. Although this study defines reproductive health education as “information provided by mothers to daughters on the topics of human sexual anatomy, sexual reproduction, puberty, sexual relationships, abstinence, and birth control,” authors of the studies included in the following discussion did not necessarily include all of these aspects in their respective studies. In addition, the authors use different terms to describe and define reproductive health education (e.g. sexuality education), and not all of them collected data on all the components of RHE considered in this study. In this dissertation, the term *reproductive health education* is used consistently as defined on page 4. The outcomes of this dissertation concern not only the setting, content of conversation, situational triggers, timing of discussion, and behavioral outcomes of reproductive health communication, but also how they influence the socio-cultural context of African mother-daughter reproductive health education.

A study (Opara, Eke, & Akani, 2010) conducted in Niger examined mothers’ perceptions of sexuality education for children. Eighty percent of these mothers believed that children should receive reproductive health education (Opara, Eke, & Akani, 2010). Sixty-five percent of the mothers reported having reproductive health discussions with their children, limited to description of body parts and reproductive organs; only 63% of these mothers had prior knowledge of menstruation before their own menarche (Opara, Eke, & Akani, 2010). Slightly less than half of study participants had received reproductive health information from their

mothers, and the study showed very limited content in reproductive health discussions. Moreover, there was no discussion about other reproductive health topics, such as menstruation and pregnancy prevention (Opara, Eke, & Akani, 2010).

In a parent-child reproductive health communication study conducted in rural Tanzania, parent-to-child reproductive health communication was triggered by the HIV pandemic. Communication occurred mostly on a same-sex basis, and took the form of warnings, threats and physical beatings (Wamoyi, Fenwick, Urassa, Zaba, & Stones, 2010). Children were reported to be fearful of talking to parents about sexual issues lest they be beaten, and parents reported a reluctance to engage in reproductive health communication due to lack of appropriate knowledge and restrictive cultural norms (Wamoyi, Fenwick, Urassa, Zaba, & Stones, 2010).

Of considerable concern are findings in a study by Lebese, Davhana-Maselesele, and Obi (2010) at the University of Venda, in South Africa, which examined and described communication about reproductive health between parents and teenagers aged 13–19 years. There was minimal to no dialogue between the parents and teenagers, with the major barrier to communication being a cultural reluctance to confront issues about sexuality (Lebese, Davhana-Maselesele, & Obi, 2010).

A literature review conducted by this author identified nine studies based on empirical research on parent-child communication about sexuality and HIV/AIDS in sub-Saharan Africa. The studies included in this literature review were identified by a search of peer-reviewed literature published between 1980 and April 2011. The authors examined articles that discussed (1) the sexuality communication process, which the authors define as including conversation on frequency, content, style, tone of discussions, preferences, and barriers to sexual communication, (2) behavioral outcomes associated with sexuality communication, which include sexual debut

and condom and contraceptive use, and (3) intervention data related to improving parent-child sexuality communication (Bastien, Kajula, & Muhwezi, 2011).

The nine studies were conducted in Nigeria, Ghana, and Kenya—three of the five African countries with the largest immigrant populations in the United States—in both rural and urban areas with youth ranging in age from 10 to 21 years. A review of the nine studies revealed differences in frequency, content, and timing of reproductive health communication, and communication was influenced by several socio-cultural and demographic factors (Bastien, Kajula & Muhwezi, 2011). Barriers to communication included parental lack of knowledge and skills and cultural norms and taboos (Bastien, Kajula & Muhwezi, 2011). Additional findings from these studies conducted in Nigeria, Ghana, and Kenya are discussed below.

Mbugua (2007) examined the phenomenon of educated urban-dwelling mothers in Kenya providing their adolescent daughters with meaningful sex education to prevent teen pregnancy and STIs including HIV/AIDS. Mbugua (2007) defines meaningful sex education as teaching about (1) menarche and secondary body changes that occur during puberty, (2) sexual urges and how they can lead to sexual intercourse, (3) abstinence as the best pregnancy prevention method, (4) condom success and failure in STI and pregnancy prevention, and (5) communication skills needed to make wise choices in interpersonal relationships. Mbugua (2007) defines *educated* as having completed high school. Data were collected via (1) focus groups with adolescent girls in their last year of high school and (2) interviews with high school teachers and mothers of girls; moreover, mothers were asked to describe (1) the sex education they received while growing up and (2) the sex education they provided their daughters .

Mbugua (2007) discovered that educated mothers in urban Kenya had high levels of formal education yet did not have fact-based conversations about sex with their daughters. Instead these mothers resorted to scare tactics that shut down any reproductive health

communication (Mbugua, 2007). Sex talks took place along gender lines with mothers educating daughters and fathers educating sons. Parental sex communication was noted to have changed little in over two decades. Ninety percent of mothers in Mbugua's (2007) study reported not receiving any sex education from their own parents. Although mothers expressed regret at not receiving sex education from their own mothers, they doubted their ability to provide sex education to their daughters, hence propagating the cycle, relying on books and school teachers to provide their daughters with this necessary information. Most educated mothers were Christians, with more devout mothers providing little or no sex education to their daughters (Mbugua, 2007).

Adu-Mireku (2003) conducted a cross-sectional study evaluating the relationship between family communications about HIV/AIDS and sexual activity and condom use among school-going adolescents in Accra, Ghana. A sample of 894 students (56.9% female, mean age 17.4 years, $SD = 1.40$) at two secondary schools in Accra, Ghana, participated in the study. *Family communication* was described as the student ever having spoken with a parent or other adult in the family about HIV/AIDS or sexual activity (Adu-Mireku, 2003). Twenty-five percent of the total sample population reported having engaged in sexual intercourse (Adu-Mireku, 2003). Of those who were sexually active, 25.7% experienced sexual debut at age 11 or younger, and, by 16 years of age, 64.7% had experienced sexual debut. For the girls in the study, only 15% reported having had sexual intercourse, 57.1% used condoms at their last sexual encounter, and 81% had talked to a parent or adult about HIV/AIDS (Adu-Mireku, 2003). According to Adu-Mireku (2003), family communication about HIV/AIDS by itself had no significant influence on sexual experience. However, those who had talked to a parent or adult family member about HIV/AIDS were significantly more likely to have used a condom the last time they engaged in sexual intercourse (Adu-Mireku, 2003).

Adu-Mireku's study (2003) highlighted the early sexual debut of the population and the relevance of providing reproductive health education to girls under the age of 11 years. Only 44.3% of the sexually active reported having used a condom at last intercourse, indicating a greater risk of exposure to HIV/AIDS and unplanned teenage pregnancy. Condom use during the last engagement in intercourse increased due to family sexual communication (Adu-Mireku, 2003), which underscores the role of family sexual communication in reducing the adolescent sexual risk behavior of unprotected intercourse.

A study conducted by Amoran, Onadeko, and Adeniyi (2005) in Ibadan, Nigeria, sought to determine parental roles in adolescent sexual initiation. The study was conducted in Idikan, an urban community located in the Northwestern part of Ibadan, Nigeria. Two hundred seventy-four participants between the ages of 10 and 24 years of age were interviewed. Females comprised 60.6% (n = 166) of the sample, and 43% (n = 119) were aged 10–14 years. Sixty-one percent (n = 160) of the total sample were Christian, 36% (n = 99) were Muslim, and 3% (n = 8) practiced traditional religions. No significant relationship between parent education and sex education of the adolescent was found. In fact, illiterate parents, primarily mothers (50%), provided the most information, while mothers with the highest education (i.e., secondary education) (13.7%) provided the least information (Amoran, Onadeko, & Adeniyi, 2005). Amoran, Onadeko, and Adeniyi (2005) concluded that due to low parental educational levels, parents are less likely to be adequately informed on sexual issues; however, illiterate parents were more likely to educate using traditional methods which were more explicit. More educated parents reportedly neglected sex education due to increased urbanization and modernization, which have made it more difficult to connect with the traditional ways of providing sexual communication (Amoran, Onadeko, & Adeniyi, 2005).

Biddlecom, Awusabo-Asare, and Akinrinola (2009) examined the relationship between three dimensions of parenting (i.e., material support measured as residing with parent or parent figures, monitoring, and communication) and recent adolescent sexual activity and contraceptive use. Data were collected via nationally representative surveys of 15–19 year olds in Burkina Faso, Ghana, Malawi, and Uganda. Results in the discussion of this article focus on that data collected from girls aged 15–19 years in Ghana ($n = 1,176$). Seventeen percent of these girls had had sex in the last 12 months, and only 56% used contraceptives during their last sexual encounter (Biddlecom, Awusabo-Asare, & Akinrinola, 2009). Overall, parents or parental figures were less involved in talking about sex-related matters or providing information on contraceptives. While this study demonstrated that parental influence can positively affect adolescent sexual activity, it did not measure the direction of association or specific topics discussed (Biddlecom, Awusabo-Asare, & Akinrinola, 2009).

Izugbara (2008) explored how and why Igbo parents in rural Nigeria discuss sexuality-related matters with their adolescent children aged 10–21 years. Izugbara (2008) prefaced his report by stating that a majority of young people in Africa have inadequate sexuality knowledge, resulting in increased incidence of HIV/AIDS, unwanted teen pregnancies, and unsafe induced abortions. One reason for the lack of knowledge on sexuality is youth's reliance on sexual information from equally ignorant peers. Izugbara (2008) was also unable to ascertain that sexuality education provided by parents was factual. Hence, Izugbara (2008) interviewed parents on (1) the discussion they had with their children, (2) the motivation behind the discussion, and (3) the factors that prompted them to talk to their children about sexuality. Participants included 73 parents of children aged 10–21 years old who had discussed sexual behavior, contraception, STIs, and reproductive physiology with their children (Izugbara, 2008).

The Igbo, one of the largest Nigerian tribes, maintain a code of silence around sexual issues (Izugbara, 2008). They usually describe sex organs and sexual activity using ambiguous, imprecise or indirect words, such as describing sexual intercourse as “to do something” Igbo culture mandates that in interactions with young people, adults do not mention sex, sexual desire, or sexual activity (Izugbara, 2008). Young people are expected to remain chaste and not develop an interest in or know anything about sex until they get married. Adolescent sexual expressions or activities are considered deviant and are associated with danger, moral problems, crime, or psychological disorders (Izugbara, 2008).

Izugbara (2008) mainly interviewed mothers (n = 58, 79%). According to Izugbara (2008), few parents could remember having received sexuality education from their own parents. Parents not only blamed modernization and westernization for a breakdown in cultural values, but also associated early sexual initiation with irresponsibility, unruliness, and waywardness on the part of their children. As noted in other studies (Biddlecom, Awusabo-Asare, & Akinrinola, 2009; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Mbugua, 2007), parents provided sexuality education along gender lines (i.e., mothers talked to daughters and fathers talked to sons). Sexuality education was found to be largely initiated and dominated by parents with little input from children (Biddlecom, Awusabo-Asare, & Akinrinola, 2009). Many participants mentioned that they would be unhappy if their children initiated the discussion. Questions were discouraged, and discussions were not well timed, meaning, they were held after children reached puberty or had already begun to engage in sexual activity (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). Children were considered sexually innocent until puberty, and parents were concerned that having sexuality discussions with children before puberty would cause them to engage in sexual behaviors (Mbugua, 2007). Discussion began at puberty also because this was the time their own mother started talking to them, and conversation

was also prompted by the child's behavior (e.g., girls being seen in the company of boys) (Izugbara, 2008).

According to Izugbara (2008), parents instilled fear about sex, reporting that they aimed to scare children away from sexual activity because premarital sex was seen as a sign of rebelliousness and could lead to ruined futures, unwanted pregnancies, school dropouts, and even death. Condoms, contraceptives, and abortions were rarely mentioned, and parents seldom encouraged use of condoms and contraceptives, despite the fact that they knew these could prevent teen pregnancy and STIs. These parents felt that mentioning condoms and contraceptives would lead to waywardness and promiscuity (Izugbara, 2008).

Another Ghanaian study examined connectedness to, communication with, and monitoring of unmarried adolescents in Ghana by parents, other adults, friends, and key social institutions to establish the role these groups play in adolescent sexual activity (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). The authors define connectedness as the nature of relationships that provides an individual with support, security and direction; moreover, communication was described as interaction and discussions on issues pertinent to the adult or young person, including the nature, content and timing of the action (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007).

Data for the study were collected via focus group discussions with 14-19 year olds, in-depth interviews with 12-19 year olds, and a nationally representative survey of 12-19 year olds. The survey was completed by 4,430 Ghanaian adolescents; 2,201 were female, and 2,229 male (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). Only 2% of the 12-14 year old girls reported ever having had sexual intercourse, and 24% of females aged 15-19 years reported having had sex. In terms of sexual communication, the mother-daughter interaction was mostly

in the form of instructions with little room for discussion (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007).

Mothers' communication styles were classified by Kumi-Kyereme, Awusabo-Asare, Biddlecom, and Tanle (2007) into four categories: (1) approachable, (2) "pass the buck" (p. 142), (3) aggressive, and (4) "gossipers" (p.142). Approachable mothers (i.e., they encouraged conversation) were in the minority, pass the buck mothers indicated that the child should ask someone else (e.g., an aunt), aggressive mothers shut down conversation any time the child brought it up, and gossipers discussed the child with others. (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007). Because of these parental communication styles, adolescent females were reluctant to inform or discuss their experiences with their parents. However, with the introduction of family life programs in the school setting, teachers are beginning to supersede parents in sexual communication. Additionally, adolescent females were subject to more monitoring than males, with younger adolescents monitored more than older adolescents. Kumi-Kyereme, Awusabo-Asare, Biddlecom, and Tanle, (2007) attribute this to attitudes towards female sexuality and social expectations.

The final Nigerian study in this review was a cross-sectional descriptive study by Mathew, Shugaba, and Ogala (2006). In this study, 459 adolescents between the ages of 10–14 were recruited to assess knowledge, behavior, and parent-child communication about HIV/AIDS. Data were collected via self-administered questionnaires with closed- and open-ended questions. Of the 459 participants, 45.3% were female. A majority of the participants were 14 years of age (55%), and 32% of the total sample reported already having had sex. Seventy-two percent had not been talked to about HIV/AIDS by their parents, and 80% had not been talked to about sex by their parents. Based on these findings, Mathew, Shugaba, and Ogala, (2006) recommend that sex education should begin during the early adolescent years.

The last two studies were intervention and evaluation studies conducted in Kenya. Poulsen et al. (2010) describe the process of adapting an evidence-based intervention designed to give parents of preteens, aged 10–12, the necessary skills to help their children avoid sexual risks and develop healthy sexual behaviors. The program was developed in Nyanza Province of Western Kenya. Assessment revealed that approximately 14% of adolescents initiated sexual activity at 13 years of age (Poulsen et al., 2010). Moreover, youth aged 10–24 years believed that insufficient knowledge about STIs, AIDS, and sexuality in general was a major contributor to adolescent health issues such as unwanted teen pregnancies and STIs (Poulsen et al., 2010). Youth also reported lack of communication with adults about sexual issues and a desire to have more communication (Poulsen et al., 2010).

According to Poulsen et al. (2010), parents reported that it was culturally taboo for them to discuss sexuality with their own children; traditionally this was the role of grandparents. However, due to shifts in cultural norms, grandparents no longer provided this education. Exacerbating the problem, parents acknowledged their lack of the knowledge, skills, and confidence in discussing sexuality with their children (Poulsen et al., 2010).

Vandenhoudt et al. (2010) present an evaluation of the Family Matters! Program (FMP) in Kenya. The aim of the evaluation was to assess (1) the community acceptability of the program and (2) the effect of FMP on parenting practices and effective parent-child communication. According to Vandenhoudt et al. (2010), parents' attitudes towards sexuality education changed after the intervention. Moreover, parents learned that talking openly about sexuality does not cause initiation of or increase in sexual activity (Vandenhoudt et al., 2010).

1.2.7 Summary of reproductive health education in select African countries

This section reviewed studies on mother-daughter reproductive health education from several African countries. Reproductive health education in some form took place in the early preteen years, starting at about age 10. Parental factors that influenced communication included education level, lack of knowledge of menstruation and pregnancy prevention, religiosity, previous reproductive health communication with their own parent, and cultural norms (Amoran, Onadeko, & Adeniyi, 2005; Izugbara, 2008; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Mbugua, 2007; Opara, Eke, & Akani, 2010). Ironically, higher levels of education did not correlate with increased communicative ability (Izugbara, 2008; Mbugua, 2007). In two studies (Izugbara, 2008; Opara, Eke, & Akani, 2010), mothers revealed that lack of information from their own mothers was a barrier to providing daughters with sexual health information.

Some parents delegated reproductive health education to other adults such as grandparents, aunts, and school teachers (Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Mathew, Shugaba, & Ogala, 2006; Mbugua, 2007; Poulsen et al., 2010). In some instances, there was minimal to no dialogue about sexuality between parent and child (Lebese, Davhana-Maselesele, & Obi, 2010). In other cases, there was reluctance to provide sexual health information because it was believed to result in “wayward” behavior or cause children to start engaging in sexual behavior (Izugbara, 2008; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Mathew, Shugaba, & Ogala, 2006). This contrasts with other studies that reveal how sexual health education leads to neither sexual initiation nor promiscuous behavior (Dreweke, 2007; Kirby, 2007; Kirby, 1999; Kirby & Miller, 2002; Kirby, Obasi, & Laris, 2006).

When reproductive education was provided, it was a unidirectional process occurring along gender lines. Mothers talked to daughters, and fathers talked to sons. Parents gave

instructions about expected sexual behavior and did not expect or condone discussion or questions. Reproductive health education was given in the form of warnings and threats in order to instill fear about sexual activity. Condom and contraceptive use were not encouraged (Izugbara, 2008; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Wamoyi, Fenwick, Urassa, Zaba, & Stones, 2010). Sometimes, children were beaten by parents for asking sexual health questions (Lebese, Davhana-Maselesele, & Obi, 2010; Wamoyi, Fenwick, Urassa, Zaba, & Stones, 2010).

The next section discusses acculturation and health behaviors in African immigrants living in the U.S. The relevance of acculturation for this dissertation is to inform on social constructs that may influence the process through which African immigrant mothers provide their daughters with reproductive health education (RHE). It is not the intention of this study to measure or analyze acculturation. The concept merely guided development of the demographic questionnaire and interview guide used to collect data for this study.

1.2.8 Acculturation and Health Behaviors in African Immigrants in the U.S.

Berry, a research leader in the field of acculturation studies, (2005) describes acculturation as “the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members” (p. 697). It occurs at two levels, the group level and the individual level. At the group level it involves changes in social structure, institutions and cultural practices. At the individual level, it entails change in personal behavior. In this study, the personal behavior that may be influenced by acculturation is the mothers’ provision of RHE to their daughters.

In reviewed studies, acculturation was measured by nativity, English language proficiency, length of stay in the U.S., age at immigration to the U.S., educational level, socioeconomic status, cultural attitudes and beliefs and religion (Akresh & Frank, 2008; Eshun,

2006; Mitha, Yirsalign, Cherner, McCutchan, & Langford, 2009; Okafor, Carter-Pokras, Picot, & Zhan, 2013; Saechao et al., 2012; Simbiri, Hausman, Wadenya, & Lidicker, 2010).

Length of stay in the U.S. in the reviewed studies varied greatly, from zero to 55 years, with mean age at immigration of 29 years (Okafor, Carter-Pokras, Picot, & Zhan, 2013; Saechao et al., 2012). None of the studies restricted enrollment based on number of years lived in the U.S.

Though none of the identified African acculturation studies examined mother-daughter reproductive health education, they provide insights into social constructs that are associated with acculturation in the African immigrant population. Acculturation was *not* measured in this study; however, concepts of acculturation were used to look at one aspect of how women talk to their daughters about reproductive health education, that aspect is their living in the U.S., which is at its very core acculturation. Some social constructs used to measure acculturation also guided development of the study demographic questionnaire and interview questions. These constructs include nativity, religion, English language proficiency, length of residence in the U.S. nativity, age at immigration to the U.S., educational level and socioeconomic status.

Acculturation is relevant to this dissertation because it informs social constructs that may influence the process through which African immigrant mothers provide their daughters with reproductive health education. The concept of acculturation merely guides the development of the demographic questionnaire and interview guide used to collect data for this dissertation.

Among immigrants, acculturation has been shown to have an association with health outcomes. Paradoxically, acculturation mostly has a detrimental effect, with more acculturated immigrants displaying worse health outcomes than those who are less acculturated (Acevedo-Garcia, 2004). A review conducted by this author of studies on acculturation and health behaviors in African immigrants in the United States revealed different definitions of

acculturation and varied social constructs to measure it. This is consistent with findings in a review of acculturation by Hunt, Schneider, and Comer (2004). Most researchers do not define acculturation, and it is inconsistently measured. Overall, in reviewed studies, acculturation has been measured using various constructs such as nativity, English language proficiency, length of stay in the United States, age at immigration to the United States, educational level, socioeconomic status, cultural attitudes and beliefs, and religion (Akresh & Frank, 2008; Eshun, 2006; Mitha, Yirsalign, Cherner, McCutchan, & Langford, 2009; Okafor, Carter-Pokras, Picot, & Zhan, 2013; Saechao et al., 2012; Simbiri, Hausman, Wadenya, & Lidicker, 2010).

Length of stay in the United States in studies reviewed for this dissertation varies greatly, from 0 to 55 years, with mean age at immigration of 29 years (Okafor, Carter-Pokras, Picot, & Zhan, 2013; Saechao et al., 2012). None of the studies restricted enrollment based on number of years lived in the United States. Based on findings by Spector (1996), who reports that it can take up to three generations for acculturation to occur, this is appropriate.

Although none of African acculturation studies identified by this author examined mother-daughter reproductive health education, they nonetheless provide insights into social constructs that are associated with acculturation in the African immigrant population. Factors that affect health behaviors in African immigrants include stigma, religion, lack of perceived norms in country of origin, competing cultural practices, lack of information, language barriers, and cost of care (Okafor, Carter-Pokras, Picot, & Zhan, 2013; Saechao et al., 2012; Simbiri, Hausman, Wadenya, & Lidicker, 2010). Additionally, differences in parenting among the African immigrant population exist related to child discipline norms, especially concerning physical discipline (Saechao et al., 2012). Higher education levels did not positively correlate

with knowledge levels of certain health behaviors (Mitha, Yirsalign, Cherner, McCutchan, & Langford, 2009).

The purpose of this dissertation is not to critique measures of acculturation; neither is it to measure acculturation. This study uses the concept of acculturation to examine one aspect of how women talk to their daughters about reproductive health education. This aspect is their life and experience in the United States, which is, at its very core, acculturation.

1.2.9 Gaps in knowledge of RHE

To date, no studies have exclusively examined how African immigrant mothers in the United States provide reproductive health education to their daughters. Moreover, no statistics on teen pregnancy and STIs in the U.S. - based African immigrant community have been published. It is unknown whether or not the common measures of acculturation (i.e., length of stay in the United States, English proficiency, religion, and SES) influence how African immigrant mothers provide reproductive health education.

A preliminary study conducted by the author of this dissertation indicates that mothers of 12–17 year-old girls are willing to provide some form of reproductive health education (Agbemenu, 2011); however, the literature indicates that this education needs to occur before age of sexual debut. Other studies suggest that the ideal age range to begin reproductive health education is 10–14 years, before sexual debut or the beginning of menarche (Izugbara, 2008; Wilson, Dalberth, Koo, & Gard, 2010). Because of this recommendation, this dissertation study focuses on RHE provided to daughters of immigrant African mothers aged 10-14 years.

1.2.10 Innovation and importance of proposed research

The cultural influences (i.e., historical, geographic, and familial factors) and cultural practices of African immigrants in the United States are distinctly different than those of the native African-American population. For example, the *Dipo* is an initiation rite of the Krobo people of Ghana that is conducted after a girl's first menstruation. During *Dipo*, girls participate in ritual tasks, bathing, and a week-long seclusion period; they are also taught about sex and birth control (Boakye, 2010). As such, the interaction between African culture and the provision of reproductive health education to teenage daughters among African immigrants needs to be studied separately from the general African-American experience and perspective.

Therefore, this dissertation project sought to examine reproductive health education between immigrant African mothers and their daughters in the United States. This project also sought to understand how mothers perceive the ways in which moving to the United States has changed the setting, timing, and content of the reproductive health knowledge they provide to their daughters aged 10–14 years. My research questions were as follows: (1) What difficulties do African immigrant mothers face in negotiating such discussions with their teen daughters in light of their exposure to American culture? (2) Do mothers perceive their role as reproductive health communicators as being different in the United States compared to in Africa? Gathering answers to such questions is vital to designing more culturally appropriate reproductive health education programs for African immigrant mothers and their daughters, which may prevent potential adolescent sexual risk behaviors.

2.0 PRELIMINARY STUDY

To understand the reproductive health communication between African immigrant mothers and their daughters, the author of this dissertation conducted a cross-sectional pilot study (IRB# PRO11030183) to examine the attitudes and beliefs of African mothers living in the United States, with the goal of (1) providing comprehensive sex education to adolescent daughters and (2) describing African immigrant mothers' strategies to prevent teen pregnancy and STIs among their daughters (Agbemenu, 2011). In this pilot study, comprehensive sex education was defined as teaching (1) abstinence for avoiding STIs, including HIV/AIDS, and unintended pregnancy, (2) the proper use condoms and contraceptives, and (3) interpersonal and communication skills to help young people explore their own values, goals, and options.

A convenience sample of study participants was recruited from Pittsburgh, PA and Buffalo, NY through advertisements circulated in African businesses and organizations. Participants were recruited from Pittsburgh, PA and Buffalo, NY, due to the author's social ties in these communities. The study involved a nine-question questionnaire. The questionnaire could be completed either online or via paper and pencil. Questionnaire items were developed based on themes identified from the literature. Fifteen immigrant African mothers from eight African countries (i.e., Kenya, Nigeria, Congo, Zimbabwe, Zambia, Botswana, Ivory Coast, and Guinea) with daughters aged 12–17 years completed the questionnaire. Mothers in this pilot study were between 20 and 50 years old (33% between 41–45 years); moreover, 86% of participants had

post-secondary education, and 46% of those with a post-secondary education had 2-year college degrees.

Strategies mothers used to prevent teen pregnancy and STIs included “talking about it,” providing access to contraceptives, teaching delayed sex, teaching abstinence, providing religious teachings, and sending daughters back to Africa. Eighty-seven percent of mothers in this pilot study were willing to talk more about providing comprehensive sex education to daughters in a group setting (Agbemenu, 2011).

The results of this pilot study generated more questions. In particular, the content of reproductive health discussions, the effect of acculturation, the timing of discussions, and the socio-cultural contexts that influence sexual health communication were not clearly elucidated from the survey conducted in the pilot study. For example, when mothers were asked how they would react to a teen pregnancy, some responded that they would send their daughters back to Africa or teach them to follow religious teachings. However, it is unclear exactly what these mothers mean by such statements and whether their intention is to protect or punish their daughters. Therefore, more data needs to be collected to clarify how immigrant African mothers approach discussing sex with their adolescent daughters.

2.1 PRESENTATIONS RELEVANT TO PROPOSED RESEARCH

Local

Agbemenu, K. (2014, May). *Ethical concerns: Recruiting African immigrant mothers in the community to discuss reproductive health communication with their daughters' ages 10–14 years*. Poster presented at the 3rd Annual Adolescent Health Research Symposium, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA, USA.

National

Agbemenu, K. (2014, September). *The interplay of culture and adolescent sexual risk behaviors: The experience of African immigrant mothers teaching reproductive health education to daughters ages 10–14 years old*. Invited podium presentation at the 2nd United States Conference on African Immigrants and Refugee Health (USCAIH-2), Pittsburgh, PA, USA.

Agbemenu, K. (2014, October). *Acculturation, health behaviors, and African immigrants in the United States: An integrative review*. Invited podium presentation at the 40th Annual Transcultural Nursing Conference, Charleston, SC, USA.

International

Agbemenu, K. (2014, April). *HIV/AIDS, STIs, and teen pregnancy: The role of mother-daughter reproductive health education for girls ages 10–14 years: Examining research evidence versus societal practice*. Invited podium presentation at the 42nd Annual Kenya Medical Association Scientific Conference, Watamu, Malindi District, Kenya, East Africa.

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1 DESIGN

This study employed a qualitative descriptive approach to explore the experience of African immigrant mothers in providing reproductive health education to their daughters aged 10–14 years old in the United States. Magilvy and Thomas (2009) describe the qualitative descriptive approach as drawing from the doctrine of naturalistic inquiry. Guba and Lincoln (1981) describe naturalistic inquiry as the study of a phenomenon without altering the environment of the participant or placing limitations on the outcome of the research. In using the qualitative descriptive approach, a commitment is made to studying the phenomenon in its natural state, allowing for the phenomenon to reveal itself without any manipulations (Magilvy & Thomas, 2009). For this study, the phenomenon is mother-daughter reproductive health communication.

The qualitative descriptive approach was selected for this study because of its effective in-depth examination of and sensitivity to health concerns grounded in a cultural context, in studies of groups whose members are racial or ethnic minority groups or overlooked (Brown & Jemmott, 2002; Jambunathan & Stewart, 1995; Magilvy & Thomas, 2009; Pincharoen & Congdon, 2003; Sullivan-Bolyai, Bova, & Harper, 2005). Conducting a qualitative descriptive study is also timely and appropriate because of the paucity of information about African

immigrants in the United States, especially concerning reproductive health communication between African immigrant mothers and their daughters.

3.1.1 Setting

It was the intention of the author of this dissertation, the principle investigator (PI), to recruit in Buffalo, NY, because of her ties with the African community there; however, no participants who met the study eligibility criteria were identified in Buffalo.

Participants were recruited from communities in Pittsburgh, PA, with large pockets of African immigrants. These Pittsburgh communities include Prospect Park, Baldwin, Penn Hills, and Lawrenceville. According to census data, 4,059 African immigrants live in Allegheny County, PA, and 1,459 in Buffalo, NY. These immigrants make up 6% of the foreign-born population in Allegheny County and 4% in Erie County (U.S. Census Fact Finder, 2011).

3.1.2 Participants and sampling

To determine the number of participants to recruit for this study, studies that used the qualitative descriptive approach were reviewed. Based on this review, it was determined that 11 to 18 African immigrant mothers of daughters aged 10–14 years would provide saturation (Dilworth, Higgins, & Parker, 2012; Granger et al., 2009; Mackintosh, 2006; Moser, van der Bruggen, Spreeuwenberg, & Widdershoven, 2008; O'Shaughnessy & Laws, 2010; Vandyk & Baker, 2012; Waters, Hall, Brown, Espezel, & Palmer, 2012) .

Recruitment of this sample size was supported by an article describing benefits of using qualitative description for working with vulnerable populations by Sullivan-Bolyai, Bova, and

Harper (2005), who recommend that a qualitative descriptive study should be conducted with 20–50 individuals or until saturation is achieved. Saturation is defined as the point at which additional data do not add new information to the categories of data already collected (Creswell, 1998). Sampling ceased once redundancy in identified themes had been observed. Redundancy was noted after interviewing the twentieth African immigrant mother.

Sampling was purposive in nature to allow for rich description of the phenomena. Because 75% of African immigrants in the United States speak English, the study was conducted in English. Table 1 outlines the data collection sequence.

Table 1: Data Collection Sequence

	Recruitment/Enrollment	Follow Up #1	Follow Up #2
Telephone Screening	X		
Informed Consent		X	
Demographic Survey		X	
Main Interview		X	
Follow Up Interview			X

3.1.3 Inclusion and exclusion criteria

A number of criteria were established for study eligibility.

The inclusion criteria were as follows:

1. Must be a mother of at least one daughter, between the ages of 10 and 14 years, either through birth or adoption, or perform the mother role through guardianship.
2. Must have been born in one of the 55 African countries and currently living in the United States.
3. Must have lived in her country of origin for at least 16 years prior to having immigrated to the United States.
4. Must be able to speak, read, and write English (interviews were conducted in English only).
5. Must have talked to daughter about RHE.

The exclusion criterion was as follows:

1. Participant who self-reports that her daughter between the ages of 10 and 14 years has a mental or developmental impairment.

3.1.4 Enrollment procedures

Recruitment efforts were made in collaboration with African communities, businesses, and social service agencies in Pittsburgh, PA and Buffalo, NY. The PI approached African community leaders, gatekeepers, business owners, and contact persons in social service agencies to discuss having access to their populations. Once collaboration was agreed upon, study flyers were distributed to African organizations, businesses, social service agencies, and their social media sites. Recruitment emails were also sent through listservs of collaborating African organizations. These flyers and emails provided a means by which potential participants could contact the PI to express interest in the study.

Partners included the Union of African Communities in Southwestern Pennsylvania, Okapi Hair Braiding Salon, Temwa Hair Braiding, International Fashion House and Global Food Market. These are businesses and organizations in Pittsburgh, that serve African immigrants.

Upon being contacted by a potential participant, the PI explained the study to her and conducted a phone screening. If the eligibility criteria were met and the potential participant consented, the PI then met with the subject at her home or other agreed-upon location (1) to obtain informed consent and (2) to have the subject complete the demographic survey and initial interview. Participants were informed to allow 2.5 hours for the in-person meeting. Participants were also instructed to select a time and place with the greatest amount of privacy that also would be free from distractions and interruptions.

3.1.5 Data collection

Data for this study were collected via (1) a 23-item demographic survey, (2) an initial, semi-structured open-ended interview, and (3) a follow- up interview, as needed.

The demographic survey included questions about age, country of origin, educational level, socio-economic status, marital status, religion, occupation, and number of years lived in the United States. This survey was administered by the PI before the initial interview. If the participant reported (or was observed having) difficulty speaking, reading, or writing in English, the survey was read aloud to the participant.

At a mutually agreed upon time, the initial in-person interview took place, typically in a private room in the participant's home, at the PI's office, or other mutually-agreed upon location such as a private room in a public library or at a community organization.

Questions asked during the initial interview were partially derived from data from the PI's pilot study and from the literature on reproductive health studies in African countries. The interview consisted of open-ended semi-structured questions and probes pertaining to the experience of African immigrant mothers providing reproductive health education to their daughters aged 10–14 years old. The interview began with an icebreaker question about life in Pittsburgh to build rapport with the participant. Following this, questions that probed the timing, content, and socio-cultural factors influencing the process were asked. Interviews lasted between 1 and 1.5 hours.

These initial interviews were double audio- recorded to guard against equipment malfunction. All interviews were transcribed verbatim by the study transcriptionist. Transcripts were identified by participant ID code and date of the interview. Audio recordings were transcribed within a few weeks of the interview. Notes were taken during the interview by the PI and then typed into NVIVO (Version 10) as soon as possible after the interview to minimize the loss of details due to lapses in memory. These notes were compared to the transcription of the original recordings to ensure accuracy and to add contextual clarification. For this study, contextual clarification means (1) noticing participants' non-verbal cues and (2) noting words or statements that may warrant follow-up questions or other adjustments to subsequent interviews (Hsieh & Shannon, 2005). Once interviews were transcribed, they were reviewed for accuracy by the PI. A turnaround time of 2 weeks between interviews was planned. Actual turnaround time was between 2 to 4 weeks.

Approximately 2 weeks after the initial in-depth interview, the participant was contacted for a clarification interview. The PI originally anticipated that follow-up interviews would take 15–45 minutes. In practice, follow up interviews were unnecessary for most participants as sufficient information was obtained from initial interviews. Throughout the process, the PI

endeavored to maintain a particular observational stance. Moustakas (1994) refers to this as “epouche” or bracketing, a process in data collection by which the researcher attempts as much as humanly possible to set aside all of his or her preconceived experiences or biases in order to best understand the experiences of the participants in the study.

Any participant concerns would have been referred to appropriate agencies such as Adolescent Medicine at the University of Pittsburgh Children’s Hospital, Planned Parenthood of Western Pennsylvania, and Planned Parenthood of Western New York. No concerns were noted. Additionally, all study instruments and the interviews were pilot tested with members of the study population. Appropriate modifications were made to the instruments and interview based on feedback from dissertation methodology experts and study population experts.

3.1.6 Participant incentives

In acknowledgement of the participants’ time investment, incentives for study participation were provided. Refreshments were provided for all interviews conducted outside the participant’s home. If the interview was conducted inside the house, participants received \$5.00 worth of fruit. This was commensurate with African culture and tradition—visits are not made “empty handed,” and a token food item is given in appreciation of the host’s hospitality.

An IRB-approved University of Pittsburgh cash card for \$30 was given to participants after the completion of all study instruments and interviews.

3.1.7 Data analysis

Descriptive statistics (i.e., frequencies, mean, and median) were calculated for demographic survey data where applicable with IBM PASW Version 22 (SPSS Inc., Chicago, IL). Interviews were transcribed verbatim by a research assistant. The PI transcribed all notes and compared them with the transcripts as described in section 3.1.6. To prepare for interviewing, the PI took Introduction to Qualitative Research at the University of Pittsburgh, School of Nursing and Qualitative Research at the University of Pittsburgh, Institute for Clinical Research Education. In these classes, the PI learned how to prepare interview guides and how to interview participants. Skills learned in these classes included building rapport with the interviewee, probing, and maintaining neutral body language. The PI also had opportunities to conduct practice interviews and transcribe interviews verbatim through class assignments. Additionally, the PI served as a note taker on another PI's study to prepare for interviewing.

In keeping with the qualitative descriptive approach, content analysis was utilized for interview data. Magilvy and Thomas (2009) describe content analysis as a data-derived process in which the researcher may begin with a pre-existing coding system that is modifiable within the course of analysis in response to the incorporation of new insights about the data. Content analysis also involves descriptions of patterns and regularities in the data confirmed by counting in a quasi-statistical analysis style (Magilvy and Thomas, 2009). Content analysis can be used in either an inductive or deductive way. For this dissertation, an inductive approach was utilized as is recommended when not much is known about the phenomenon in question or if knowledge is fragmented (Elo & Kyngas, 2008).

After reading a transcript several times to get a sense of the whole, coding was performed. All transcripts were reviewed by the PI and a second coder who was a doctorally-

prepared qualitative expert. Exemplars were also developed to facilitate understanding of the codes (Hsieh & Shannon, 2005). The list of codes was then grouped into higher-order headings, collapsing similar categories, with the goal of fully describing the phenomenon to generate knowledge and increase understanding (Elo & Kyngas, 2008; Hsieh & Shannon, 2005). Codes were revised or augmented as necessary. Codes identified across transcripts were identified as themes (Graneheim & Lundman, 2004). The PI also consulted with the dissertation methodologist (i.e., Dr. Martha Terry) to ensure that developed codes were true to the data. Sections of text were coded to preserve the context of the conversation. Definitions for each code were developed.

3.1.8 Data management

To ensure successful audio capture, all interviews were doubly recorded using two digital recorders. Replacement batteries were carried to each interview session. Audio files were copied to an external password-protected computer file from the digital recorder for transcription. All participants were assigned a pseudonym that was used on all documentation, rather than using the participant's actual name. Contact information, linked with participants' pseudonym, was stored in a password-protected, encrypted, user-restricted computer file. All other study materials, including consent forms, were kept in a locked desk drawer accessible only to the PI in the PI's locked PhD student study area. Digital audio data will be stored on a password protected flash drive in the locked desk drawer for a minimum of 7 years.

NVIVO (Version 10) was utilized for data management, which provides a storage and analysis site for all transcribed interviews and notes. NVIVO (Version 10) is a qualitative data analysis computer software package designed for collection, organization and analysis of very

rich text-based or multimedia information (QSR International, 2013). The PI completed training in the use of this qualitative data management program by taking a qualitative data analysis, management, and presentation course at the University of Pittsburgh, School of Education.

Rigor was addressed in the following ways in this study:

Credibility—While an interview guide was utilized to begin or refocus the interview, participants ultimately guided the direction of the interview (i.e., new concepts relevant to the subject matter that were brought up by the participants were pursued). To further augment credibility, the research and analysis protocols were clearly outlined, which will allow other researchers to replicate the study process.

Auditability—The PI maintained an audit trail by means of methodological memos that detailed all analysis decisions and emerging ideas pertaining to code development, assignment and sampling decisions, and conversation with the second coder.

4.0 RESEARCH PARTICIPANT RISKS AND PROTECTIONS

4.1 HUMAN SUBJECTS

This study used in-person and phone interviews. Contact information was collected to schedule in-person interviews or follow-up phone interviews and to provide addresses to where study compensation was sent to participants. Potential participants self-identified as African immigrant women living in Pittsburgh, PA. Those who were mothers aged 25 years and above participated. The study was advertised through emails, flyers placed in African businesses (e.g., grocery stores and hair braiding salons), and advertisements on a social media site (i.e., Facebook), which has proven very effective in notifying African immigrants in Pittsburgh of ongoing events. All interviews were digitally recorded.

After receiving information about this study from an African immigrant community organization or community leader, potential participants contacted the PI by phone, and the PI screened the potential participants to establish their eligibility for the study. No data were collected before verbal informed consent was obtained. When verbal informed consent was being obtained, participants were informed that they could withdraw from the study at any time without consequence. To further protect participants, no identifying information was collected during the interviews.

Once verbal informed consent was obtained, participants completed a demographic survey. Recordings from the interview were downloaded to the PI's computer, which was password protected and used encryption when transmitting files. To prevent corruption of received information due to, for example, computer viruses, the PI ensured that the computer receiving transmitted information had updated firewall and antivirus protection. Study data were further managed in a secure password protected database. Research records will be maintained a minimum of 7 years or as long as it may take to submit publications. Responses will be shared in aggregate and participant pseudonyms will be employed when direct quotes from interviews are used in presentations or publications of the study.

4.2 PROTECTION OF HUMAN SUBJECTS

The study was approved by the University of Pittsburgh Institutional Review Board. Informed consent was explained to participants and obtained prior to any involvement in the study. The informed consent form was written at the lowest reading level possible without compromising the intent of communication. In addition, the interview began with the PI reading from a script that informed potential participants that (1) they were participating in a research study and (2) could choose to end the interview at any time. As this study sought to examine perceptions of exclusively African immigrant mothers with daughters, no other sample group was required.

4.3 POTENTIAL RISKS

There were minimal risks involved in participating in the proposed study. Participants may have felt uncomfortable sharing their beliefs about sex and sex education or sharing their socio-demographic data. There was also the potential risk of participant privacy invasion if their responses to the interview questions were overheard, but this was monitored carefully during the interview process. All survey data will be presented in aggregate. Participants were asked to assign themselves pseudonyms to be used when quoting them.

4.4 PROTECTION AGAINST RISKS

The introductory script read at the beginning of the interview alerted participants that they were taking part in a research study. Participants were also informed that they could stop the interview at any time before completion if they decided they no longer wanted to participate in the study. No identifying information was included on interview forms. A private area was used for the interviews.

4.5 POTENTIAL BENEFITS OF THE PROPOSED RESEARCH

Participants received no direct benefits from participating in the study. However, participation was likely liberating for participants because they had the opportunity to share their experience and be represented in the literature. Moreover, mothers likely benefited through becoming more

aware of reproductive health communication with their daughters. This study also helped to inform future interventions that could function to reduce health disparities.

4.6 IMPORTANCE OF KNOWLEDGE GAINED

There is a dearth of research on how African immigrant mothers in the United States communicate with their daughters aged 10–14 years about reproductive health issues. It is expected that the results of this qualitative study will contribute to understanding a population in the United State that has increased rapidly in size over the past decade.

4.7 DATA SAFETY AND MONITORING PLAN

All participant data were protected through several modalities. Downloaded digital interview files were stored on a password-protected computer. This computer had up-to-date antivirus programs and firewalls. Participant identifiers and completed instruments were stored in a locked cabinet. Only the PI and the dissertation committee were able to access this information. Weekly meetings were held with the PI, chair, and other committee members as needed during the data collection and analysis phases to review the process and emergent concerns. Overall, the PI was fully responsible for maintaining participant safety throughout the study process.

4.8 INCLUSION OF WOMEN AND MINORITIES

Due to the specific aims of this study, only African immigrant women were enrolled as participants.

4.9 INCLUSION OF CHILDREN

No children or minors were enrolled in this study. The study sought to examine the experience of mothers of daughters aged 10–14 years old; therefore, no women under the age of 18 years were enrolled.

5.0 STUDY SUMMARY

The purpose of this qualitative study was to describe the experience of African immigrant mothers engaging in reproductive health education with their daughters aged 10–14 years using a questionnaire and interviews for data collection

The study presented in this dissertation has three aims. The first two aims of the study were achieved using a qualitative approach and interview methodology to describe the mothers' feelings, thoughts, judgments, attitudes, and beliefs that emerged as a result of engaging in reproductive health communication with their daughters. This approach facilitated the understanding of mothers' opinions on the positive and negative factors associated with providing their daughters with reproductive health education.

The third aim of this study was accomplished using a qualitative approach featuring a questionnaire and interview methodology to examine mothers' perceptions of how moving to the United States has changed their ideas about speaking to their daughters about reproductive health. This approach facilitated an understanding of the barriers to providing reproductive health education influenced by the mothers' upbringing in their respective countries of origin and exposure to American culture in the United States.

Three manuscripts are presented in the following chapters. The first manuscript, formatted for the *Journal of Immigrant and Minority Health*, discusses results from a feasibility study, conducted prior to this dissertation, which examined the attitudes and beliefs of African immigrant mothers providing comprehensive sex education to daughters aged 12–17 years. The

second and third manuscripts address the three aims of this dissertation mentioned above. The second manuscript, presented in Chapter Eight, is formatted for the *Journal of Nursing Scholarship*, reports the main results and findings of the qualitative study findings. Manuscript three, presented in Chapter Nine, is formatted for the *Journal of Transcultural Nursing* and describes the mothers' perceived changes in the reproductive health communication dynamic with their daughters due to their immigration to the United States.

5.1 PROPOSAL CHANGES

Once the study began, the PI realized that part of the recruitment process was ineffective. The initial study protocol dictated that once potential participants heard about the study, they were to contact the PI via email or phone to be screened for study eligibility. Potential participants became aware of the study through fliers and posts in social media groups. However, no participants contacted the PI. Therefore, IRB approval was sought to allow the PI to not only obtain potential participant information, but also conduct screening at the point of contact, (e.g., a community event).

The PI also found that some potential participants had concerns about providing social security numbers to receive study compensation via the WePay™ card system. Therefore, to address this issue, an IRB modification was requested to use the “Man on the Street (MOS) Approach” and a social security number collection waiver. The MOS approach allows participants to be paid in cash. This approach typically allows for amounts of \$10.00 or less, but an exception was granted for this study, which offered participants \$30.00 in compensation. The

social security number collection waiver freed the PI from collecting social security numbers for study compensation. Moreover, as a result of the waiver, 28% of the compensation amount was not withheld for taxes because money received from study participation is considered income and is taxable.

In-person screening scripts, telephone screening, group presentation scripts, and a verbal consent form were also added to the protocol. The in-person screening scripts were added in order to establish study eligibility at point of contact (i.e., African community events). The telephone screening script was used by the PI when she was contacted by potential participants. The group presentation script explained study aims and procedures in easy-to-understand language at community meetings. An informed consent form was initially intended to be used for the study, but a verbal consent form was used instead to accommodate potential participants who had difficulty reading English.

Recruitment was initially planned to be conducted in Pittsburgh, PA and Buffalo, NY. The PI visited Buffalo three times. Although two potential participants in Buffalo contacted the PI about participating in the study, they were ineligible to participate because they had never talked to their daughters about reproductive health issues. Therefore, no participants were recruited in Buffalo. The PI also discovered that these two mothers misunderstood the goals of the study. The mothers were under the impression that the PI was going to teach them how to talk to their daughters about reproductive health issues. In fact, one of the mothers invited a group of her friends to attend the teaching session. Although these mothers were not able to participate in the study, the inability to recruit participants in Buffalo revealed a need of the mothers of teenage daughters in the African immigrant community in Buffalo.

No changes were made to the interview guide or demographic questionnaire throughout the process.

5.2 STUDY RESULTS

5.2.1 Demographics

Descriptive statistics

Descriptive statistics were computed using SPSS (version 22.0, IBM, Inc., Chicago, IL).

Statistics included mean, standard deviation, mode, frequency counts, skewedness, and kurtosis.

Categorical variables included country of origin (nominal), education level (ordinal), and religion (nominal). For nominal data frequencies, modes, ranges, and percentages were computed. For ordinal data, frequencies and percentages were computed.

Data screening procedures

Preliminary data screening was conducted to assess data accuracy, missing values, and detect outliers. First, data were visually examined for any missing data. Inconsistencies were examined by generation of descriptive statistics and with the use of graphical representation of the variables. Minimum values, maximum values, means, and standard deviations were reviewed to insure that they were reasonable. If data were missing, the study participant was contacted to complete the questionnaire. All missing data were obtained. Demographic variables obtained included the following:

1. Country of origin
2. Number of years in United States
3. Other countries lived in

4. Current educational level, religion and socioeconomic status (SES)
5. Daughters' country of birth
6. Place(s) lived in Africa
7. Reason for immigration and visa status
8. Marital status

5.2.2 Qualitative results

A total of 25 subthemes emerged from interview data. They are presented in Table 2 below.

Ten subthemes emerged related specific aim 1 (i.e., Describe the experience of African mothers living in the United States in providing reproductive health education to daughters aged 10–14 years), which included, experiences of the mothers interacting with their daughters, themes that highlighted the mothers' own experiences during their adolescent years in their country of origin.

Eleven subthemes emerged related to the timing, content and socio-cultural context of mother-daughter communication (i.e., specific aim 2: Describe timing, content of education and socio-cultural context that influence mother-daughter reproductive health education. To establish socio-cultural context, mothers answered questions on teen pregnancy, STIs, and HIV/AIDS in their country of origin.

Four subthemes emerged that were associated with specific aim 3: Examine African women's perceptions of how moving to the United States changed their ideas about speaking to their daughters about reproductive health. These subthemes also addressed the social constructs of acculturation such as languages spoken, foods eaten, and friends kept. The 25 subthemes built up to three themes, which are discussed in detail in Chapter 8.5.

Table 2. Interview Data Subthemes

Subtheme Codes	Description
1. Experience	Mothers' actual experience of receiving reproductive health education while growing up in her country of origin
2. Timing	Includes (1) situational triggers and (2) age of daughter when mother began to provide reproductive health education
3. Setting	Refers to venue in which mother provides reproductive health education to her daughter (e.g., at home, car, or at a social event)
4. Content of RHE	Indicates topics included in the study's definition of reproductive health education that are discussed by the mothers (e.g., topics of human sexual anatomy, sexual reproduction, puberty, sexual relationships, abstinence, and birth control), which included monthly periods, abstinence, detailed information on the menstrual cycle, menstrual hygiene, condom use, contraceptives, and age of maturity
5. Cultural Factors	Refers to the influence of culture on communication
6. Socio-Cultural Context	Describes the set of African-influenced beliefs, traditions, practices, and actions of African immigrant mothers regarding reproductive health education
7. Myths	A widely held but false idea about sexual health issues
8. HIV/AIDS	Refers to conversations and practices around HIV/AIDS as a mother was growing up and in communication with her own daughter
9. STIs	Mothers' report of exposure to and talk about STIs (e.g., types of STIs, gonorrhea, syphilis, and herpes)
10. Taboos	A reported sexual behavior prohibited or restricted by social custom
11. Mothers' Report of Teen Pregnancy in Country of Origin	Describes mothers' report of discovery and reaction to other girls' teen pregnancy while growing up, which includes hidden pregnancies, abortions, school drop-outs, disgrace to family, running away from home, and public disgrace (e.g., following a pregnant girl while beating tins)
12. Mothers' RHE Sources	From where a mother received RHE (i.e., own mother, auntie, friends, media, or school)
13. Mother's RHE Conversation Content	Refers to content of RHE conversation moms had growing up with her mother, friend, other adult, or school
14. RHE Source for Daughter	Describes source of RHE for daughter (e.g., mom, auntie, grandmother, extended family member, or school) and mention of dad not being a source of RHE

15. Sexual Issues in Country of Origin	Mothers' report of how boy-girl sexual issues (i.e., sexual abuse, predatory "teacher-student" relationships, exploitative relationships such as "sugar daddy," and female genital mutilation) were discussed, handled, or managed in country of origin
16. Daughter's Development	Describes social development (e.g., daughter involved in relationship with boy, maturation, make-up use, cell phone use, and social media use) and reproductive development (e.g., breast development- tanner stage, age when monthly periods and growth of pubic hair began)
17. Mom's additional desired RHE topics	Additional RHE topics mom reported wanting to discuss with daughter. E.g. HIV/ AIDS and STDs.
18. Reported Daughter's Response to RHE	Describes mothers' report of daughters' response to RHE (e.g., embarrassed or empowered)
19. Values	Values instilled by mother in daughter (i.e., focus on academics, self-sufficiency, female empowerment, and independence)
20. Raising Independent Women	Mothers' descriptions on how to raise "independent women"
21. Mother's Beliefs, Attitudes and Opinions about RHE for Daughters	Describes mothers' thoughts on the positive and negative factors associated with providing their daughters with RHE. Also describes mother's feelings, thoughts, judgments, attitudes, and beliefs that emerged as a result of engaging in reproductive health communication with the daughter and why RHE might be provided
22. Adequacy and Accuracy of Mother-Daughter RHE	Discussion of mothers' feeling about whether or not the RHE provided by her or another sources was sufficient
23. Changes Due to U.S. Move	Mothers' report of cultural changes due to move to the United States (e.g., time, family support, clothes, and freedom of speech)
24. Reported U.S. Norms	Mothers' report of believed U.S. cultural and social norms
25. Additional RHE Concerns Raised by Mother When Prompted	Additional RHE topics/concerns mentioned by mother towards the end of the interview (e.g., same-sex relationships, blending cultures, and how to recognize change in behaviors of daughter)

5.2.3 Study strengths and limitations

This study had two major limitations. First, participants were recruited only from Pittsburgh, PA. Because the PI lives in Pittsburgh, PA and has a family member who lives in Buffalo, NY, the PI originally intended to recruit from both Pittsburgh and Buffalo, NY. Recruitment was planned for in these two cities to keep travel and accommodation costs as low as possible; however, no women who met the eligibility criteria were identified in Buffalo. Through the recruiting process that PI learned that Pittsburgh and Buffalo have very few African immigrants compared to other cities like New York with 80,000 African immigrants and Ohio with 40,000.

The second limitation is that the study was conducted in English. Mothers who do not speak English but who may otherwise meet the inclusion criteria were not able to participate in the study. Due to this language limitation, no participants were recruited from the Somali, Congo, and Burundi communities of Pittsburgh, who according to their community leaders, would have needed translation services to participate in the study.

Nonetheless, recruitment of 20 African immigrant mothers was possible because the majority of the African immigrants in Pittsburgh come from English-speaking countries. For example, in 2011, the PI conducted a pilot study in Pittsburgh and Buffalo and was able to recruit 15 African immigrant mothers.

**6.0 MANUSCRIPT 1: ATTITUDES AND BELIEFS OF IMMIGRANT SUB-SAHARAN
AFRICAN MOTHERS TOWARD PROVIDING COMPREHENSIVE SEX EDUCATION TO
DAUGHTER AGED 12–17 YEARS: A PILOT STUDY**

6.1 COVER LETTER TO JOURNAL EDITOR

Sana Loue, J.D., Ph.D., M.P.H., Editor
Journal of Immigrant and Minority Health
Department of Epidemiology and Biostatistics
Case Western Reserve University, School of Medicine
10900 Euclid Avenue
Cleveland, OH 44106-4945

Dear Dr. Loue,

Attached find a manuscript entitled, “Attitudes and Beliefs of Immigrant Sub-Saharan African Mothers Toward Providing Comprehensive Sex Education to Daughters Aged 12–17 Years: A Pilot Study.” We request that the manuscript be reviewed for possible publication in the *Journal of Immigrant and Minority Health* as an original research article.

The paper reports on a feasibility study. With its focus on immigrant African mothers, we believe this paper is commensurate with your journal’s focus on the health of immigrant populations.

This paper has not been published and is not under consideration for publication elsewhere. We do not have any related papers published, in review, or in press on this topic. There are no conflicts of interest. Both authors have been directly involved in the research reported in the paper, have read and approved the manuscript, and agree to its submission.

If you have any questions, please do not hesitate to contact me. We look forward to receiving comments from reviewers.

Respectfully,



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6.2 ABSTRACT

Background

The literature currently contains no comprehensive sex education (CSE) interventions targeting the African immigrant population. African immigrant mothers have been inhibited by several factors from providing their daughters with CSE. The primary aim of this study was to identify attitudes and beliefs of Sub-Saharan immigrant mothers living in the United States towards providing comprehensive sex education to their daughters aged 12–17 years.

Methods

The study utilized a one-time anonymous nine-question survey. Fifteen women who met the inclusion criteria completed the study survey online or via paper format.

Results

African immigrant mothers are willing to allow comprehensive sex to be taught in schools and at home. Accepted education appears to range from religious and moral teaching to some factual information.

Discussion

This research will potentially assist in the designing of more culturally appropriate comprehensive sex education programs for African immigrant mothers and their daughters, STIs.

***Keywords:* Africa south of the Sahara, emigration and immigration, mothers, adolescent, sex education**

6.3 BACKGROUND

Adolescent sexual risk-taking behaviors have been identified as a leading national priority under the Healthy People 2010 initiative, and it continues to be a priority in the Healthy People 2020 initiative (Hutchinson & Montgomery, 2007). Adolescent sexual risk-taking behaviors include having multiple sexual partners, not using protection during intercourse, and using drugs and alcohol in the time surrounding a sexual encounter.

National data had identified minority youth as having a more risky sexual behavior profile, with Black and Hispanic youth reporting higher rates of (1) sexual activity, (2) sexual debut before 13 years of age and (3) multiple partners (Meneses, Orrell-Valente, Guendelman, Oman & Irwin, Jr., 2006).

Rates of teen pregnancy and sexually transmitted infections (STIs) are disproportionately higher in minority communities and even more so in the African American community (Hutchinson & Montgomery, 2007; Jones & Silitsky, 2004; Meneses, Orrell-Valente, Guendelman, Oman, & Irwin, 2006). African American teenage girls are at a particularly higher risk of early sexual behavior because they develop earlier and appear older, hence becoming more sexually desirable (Doswell et al., 2004).

According to the Centers for Disease Control and Prevention (CDC), in 2009, approximately 410,000 teen girls between the ages of 15–19 years gave birth in the United States (CDC, 2011a). In 2009, African-Americans females aged 15–24 years had chlamydia rates eight times higher than their white counterparts, rates of gonorrhea 20.5 times higher ; moreover,

slightly over 52% of reported cases of syphilis were in the African-American population (CDC, 2011b). An unplanned or unwanted teenage pregnancy can lead to a cascade of negative events. Teenage pregnancy is associated with a higher risk of obstetric complications such as pre-eclampsia and pregnancy-induced hypertension as well as higher neonatal morbidity and mortality, including premature onset of labor, premature delivery, and low birth weight babies (Kirby, 2007).

Research suggests that comprehensive sex education (CSE) is more effective than abstinence-only-until-marriage sex education in decreasing rates of teenage pregnancies and STIs (Dreweke, 2007). Comprehensive sex education (CSE), which includes education on abstinence *and* birth control methods, has been shown to be effective in decreasing incidences of unprotected sex, delaying sexual debut, decreasing number of partners, reducing incidences of sex, and increasing condom use (Kirby, 2007). CSE neither encourages teenage sexual activity nor leads to early initiation of sexual activity. Instead, comprehensive sex education improves adolescent decision-making skills and boosts self-confidence (Agbemenu & Schlenk, 2011; Dreweke, 2007).

Parent-child communication, specifically mother-daughter communication about sex, has been found to reduce incidences of sexually transmitted infections (STIs) and other deleterious effects of adolescent sexual risk-taking behavior. For example, in a study that examined the effect of mother-daughter sexual communication in early to middle African-American females aged 12–15 years, Dilorio, McCarty, Denzmore, and Landis (2007) found that sexuality-related communication with mothers led to a reduction in adolescent sexual risk behaviors. In another study that examined mothers' perspectives about reproductive health discussions with their adolescent daughters, Hannan, Happ and Charron-Prochowik (2009) found that mothers' feared their daughters having unplanned pregnancies but felt uncomfortable discussing reproductive

health issues. In a similar study investigating the perspectives of mothers and daughters on barriers to timely access to risk- appropriate reproductive care, McKee, O'Sullivan, and Weber, (2006) identified a lack of trust of health care clinicians and the mother's role as a gatekeeper as a barrier to girls accessing reproductive health care. Moreover, maternal awareness of their teen girls' sexual activity in this study was revealed to be low (McKee, O'Sullivan, & Weber, 2006).

However, parents—and mothers in particular—face several barriers to engaging their daughters in communication about sex. For example, in a qualitative exploration of discussions by black parents and adolescents about family planning and contraception, Akers, Schwarz, Borrero, and Corbie-Smith (2010) assert that (1) parents' contraceptive knowledge was low and (2) boys reportedly received more assistance in obtaining condoms than girls did when accessing contraceptives. This finding suggests a gender bias in expected sexual behavior.

In a similar study on mother-daughter communication about growing up, Crichton, Ibisomi, and Gyimah, (2010) found that mothers reported cultural taboos, embarrassment, lack of information, and uncertainty about appropriate approaches as barriers to communicating with their daughters. Conversely, the daughters stated that they preferred to receive communication about sex from their mothers and that they wanted to receive the information often and starting from a young age (Crichton, Ibisomi, & Gyimah, 2010). In contrast, Mbugua (2007) identified socio-cultural and religious barriers to mothers talking to daughters about sex. Mbugua (2007) reports that urban-dwelling mothers in Kenya were well educated and had knowledge of contraception, but they still were unable to provide their daughter with useful information. In a similar study examining mother-adolescent discussions about sexuality and HIV/AIDS, Lefkowitz, Boone, Fong-Au, and Sigman (2001) found that mothers who discussed safer sex practices tended to have more education but were less religious. Clearly, particular social and

psychological barriers can prevent mothers from communicating CSE that could result in reduced sexual risk among their daughters.

Indeed, research shows that mother-daughter communication is a significant mediator in preventing teenage pregnancy, STIs, and other sexual risk-taking behaviors (Lefkowitz, Boone, Fong-Au, & Sigman, 2001; Dilorio, McCarty, Denzmore, & Landis, 2007; Hutchinson & Montgomery, 2007). Mothers often want to provide sexual communication but have limited knowledge and suffer socio-cultural and religious barriers to providing this information; moreover, many mothers do not know at what age to begin this communication (Akers, Schwarz, Borrero & Corbie-Smith, 2010; Mbugua, 2007; Crichton, Ibisomi, & Gyimah, 2010; Wilson, Dalberth, Koo, & Gard, 2010). Culture, socio-economic status, mother's age, communication style, religion, religiosity, education, and racial and ethnic factors all have an impact on the effectiveness of mother-daughter communication about CSE in reducing sexual risk behaviors.

In the United States, the African-American population includes those who have recently immigrated to the United States from Africa and other countries in the world, with no clear delineation between a set of very heterogeneous groups (CDC, 2013). Although African immigrants contribute to the overall high incidences of teen pregnancy and STIs typically categorized as African-American, no CSE interventions specifically targeting the African immigrant population in the United States are currently in use. To address this problem, we formulated the following aims as a means to better understand the needs of this target population \and work towards the development of appropriate CSE interventions.

6.3.1 Study aims

1. To identify the attitudes and beliefs of Sub-Saharan African mothers living in the United States toward providing comprehensive sex education to their daughters aged 12–17 years.
2. To determine and examine these mothers' potential strategies to prevent incidences of teen pregnancy or STIs.

6.3.2 Theoretical and conceptual framework

The theoretical framework that guided this study was the Precaution Adoption Process Model (PAPM) (see Figure 2). The PAPM model is similar to Prochaska's Transtheoretical Model of Change; however, the PAPM emphasizes individual readiness about deciding to act. Moreover, PAPM acknowledges that people do not make complex health decisions "...at one point or in one decisive moment" (Mogobe et al., 2007, p. 27). Nonetheless, PAPM theory is applicable to behaviors that require deliberate change rather than gradual habit development. PAPM is also used to explain how people arrive at a decision and how that decision is translated into an action. Similarly, mothers in our study underwent a transformative process in deciding to talk to their daughters about CSE and how to do it. PAPM is comprised of a seven-stage decision-making process: (1) unaware of issue, (2) unengaged by issue, (3) deciding about acting, (4) deciding not to act, (5) deciding to act, (6) acting, and (7) maintenance.

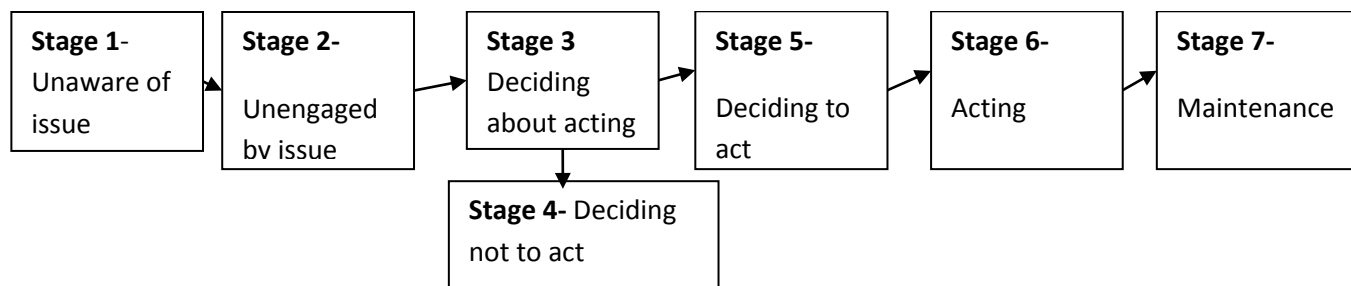


Figure 2. Stages of the Precaution Adoption Process Model (PAPM) (adopted from Mogobe et al., 2007)

Weinstein (1988), the developer of PAPM, explains the process by way of the emergence of HIV/AIDS in the 1980s. Weinstein (1988) notes that at that time, it would have been of little benefit to question population members about their likelihood of acquiring the virus because there was no awareness of what the virus was and what the consequences of getting the virus were. In this stage (i.e., stage of unawareness), participants are unaware of the adaptive challenge and have to go through the process of 'precaution adoption', in which the population has been engaged by a threat and has formed beliefs about possible responses (Weinstein, 1988). Once informed, the individual can then decide for himself or herself whether or not to change a particular behavior to decrease the health risk caused by the behavior (Weinstein, 1988; Weinstein & Sandman, 1992).

6.4 METHODS

6.4.1 Ethical approval

Survey participants were recruited after our study was approved by the University of Pittsburgh, Institutional Review Board (IRB# PRO11030183). Because the surveys were anonymous, consent was implied by agreeing to complete the survey. The survey script also reminded participants that they were under no obligation to complete the survey.

6.4.2 Data collection

The Union of African Communities (UAC) in Southwestern Pennsylvania was approached to assist with recruitment. The UAC is an umbrella organization that serves the interests of African immigrants. It is comprised of over 7,000 members from over 25 African countries and communities. UAC advertised our study via its email listserv. A link was provided in the email received by potential participants to complete the online survey. Online surveying was not very successful. Only three participants completed the survey online over a 2-month period, despite repeatedly emails sent via the UAC listserv.

A convenience sample of African immigrant mothers was recruited from African businesses and organizations in Pittsburgh, PA and Buffalo, NY. These cities were selected because of ties the PI has established in these communities. Participants completed a cross-sectional, anonymous nine-question survey. Survey items were developed based on themes identified from the literature. Surveys were completed via paper forms or anonymous online format. To prevent repeat online submissions, IP address restrictions were utilized.

To address this problem, recruitment was extended to two African-owned braiding salons in the Pittsburgh region. Moreover, paper versions of the survey were provided. The business owner agreed to post study flyers and recruit via word of mouth. Participants who met the study criteria completed the survey and sealed it in a provided envelope to maintain confidentiality. Envelopes were collected by the business owner, and the PI was called to pick up the completed surveys. Two participants were recruited in Buffalo by an African community leader. These participants completed paper forms.

6.4.3 Participants

Fifteen immigrant African mothers from eight African countries (i.e., Kenya, Nigeria, Congo, Zimbabwe, Zambia, Botswana, Ivory Coast, and Guinea) with daughters aged 12–17 years completed the survey (see Figure 2). Mothers were between 20–50 years old (33% between 41–45 years), 86% had post-secondary education, and, of those, 46% had a 2-year college degree.

6.5 RESULTS

Fifteen African immigrant mothers completed the nine-question survey either online or via paper format. Ninety-three percent of participants were receptive to teaching CSE themselves or having it taught in schools. The most frequently expressed emotions among the mothers to potentially finding out that their teen daughters were pregnant or had a sexually transmitted infection (STI) included denial, anger, shame, disappointment, and sadness. Only two mothers indicated they would be supportive of their daughters in this situation. Mothers' potential reaction to a teen pregnancy, STIs, and prevention strategies were categorized into three main themes: (1) educational reactivity, (2) medical reactivity, and (3) cultural reactivity. Educational reactivity was defined as the use of an education solution to prevent teen pregnancy or STI. Medical reactivity marks the use of a medical intervention, and cultural reactivity refers to the use or mention of a cultural practice or setting to prevent teen pregnancy or STIs.

African immigrant mothers surveyed in this study would employ a range of strategies to prevent teen pregnancy and STIs. Most reported that they would prefer to (1) talk to their daughters, (2) provide access to health care, or (3) send their daughters back to their country of origin if they became pregnant. Their reactions are consistent with the literature on mother-daughter sexual communication in African countries (Nganda, 2008).

Among the mothers, there was a great reliance on religious and moral teaching. Mothers who indicated that they would talk about CSE with their daughters were vague in their description of the content of conversation. These mothers said they would "talk about it," "teach

morality,” “let my daughter know Jesus plans for her life,” and/or “let my daughter know about Bible teachings.” This is consistent with findings in Kenya where mothers with more education did not provide daughters with actual sex education (Mbugua, 2007). Other strategies these mothers reportedly would use to prevent teen pregnancy or STIs included providing access to contraceptives, teaching delayed sex, teaching abstinence, or sending daughters back to Africa (Agbemenu, 2011).

Only 13% of the participants said they would provide contraceptive access. Most participants supported abstinence, delayed sex, or sending the daughter back to Africa. We hypothesized that if the daughter were living in Africa, she would be subject to more conservative beliefs about CSE. Moreover, sending the daughter to Africa may be either a punitive or protective action—punitive in that the daughter would not have access to social services that are available to teenage mothers here in the United States (e.g., food stamps and Medicaid), or protective in that the mother would continue to offer financial support while the daughter and child were in Africa. Furthermore, this financial support would last longer than it would in the United States.

6.6 DISCUSSION

Results of this study generated more questions. In particular, the content of reproductive health discussions, effect of acculturation, timing of discussions, and socio-cultural factors that influence comprehensive sex education among our target population were not clearly elucidated by the survey. For example, when mothers were asked how they would react to a teen pregnancy, some responded by saying that they would send their daughters back to Africa or teach them to follow religious teachings. However, it is unclear exactly why mothers would make such statements and whether their intention is to protect or punish their daughters. Nevertheless, it was

encouraging to learn that 87% of mothers in this study would be willing to talk more about providing comprehensive sex to daughters in a group setting.

6.6.1 Study limitations

The major limitation of this study is the lack of data on the target population. Very few studies have exclusively examined African immigrants in the United States and their health concerns. In addition, because the African-American population in the United States comprises not only heritage African Americans, but also those who have recently immigrated to the United States from Africa and other countries in the world, statistics on diseases (e.g., adolescent STI rates) and conditions (e.g., teen pregnancy) are reported for this group, which is extremely heterogeneous, as one statistic. As such, statistics reported in this study do not provide a clear picture of the African immigrant population in the United States.

6.7 NEW CONTRIBUTION TO THE LITERATURE

There is a paucity of research on African immigrants in the United States. We did not identify any other studies in the literature that examine African immigrant mothers and their attitudes and beliefs towards providing comprehensive sex education to their daughters. This study illustrates that although literature on African mothers reveals their reluctance to discuss sexual issues with their daughters, there may be factors associated with living in the United States (e.g. Length of stay that make these mothers more willing to facilitate access to or provide comprehensive sex education.

6.7.1 Implications for Future Research

Most mothers surveyed in this study were willing to provide CSE to their daughters. However, it is not known if mothers actually provide CSE, at what age it is provided, and its specific content. Further research is needed to determine (1) whether or not the mothers actually provide CSE, (2) their knowledge of CSE components, (3) the age at which education is provided, (4) the content of the education, and (5) the socio-cultural factors that influence this process.

Our results will potentially assist in establishing whether or not there are indeed differences in the attitudes and beliefs of immigrant African mothers compared to the reported attitudes of African-American mothers, as identified in the literature, related to providing CSE to daughters. This determination could lead to the development of more culturally-appropriate comprehensive sex education programs for African immigrant mothers and their daughters, which could potentially lead to reduced rates of teen pregnancies and STIs among this population.

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**7.0 MANUSCRIPT #2: EXPLORING THE EXPERIENCE OF AFRICAN IMMIGRANT
MOTHERS PROVIDING REPRODUCTIVE HEALTH EDUCATION TO THEIR
DAUGHTERS AGED 10–14 YEARS.**

7.1 COVER LETTER TO JOURNAL EDITOR

November 12, 2014

Dear editors and reviewers,

Please consider the attached manuscript, “Exploring the experience of African immigrant mothers providing reproductive health education to their daughters aged 10–14 years.” for publication in the *Journal of Nursing Scholarship*. This paper describes the experiences of African immigrant mothers providing reproductive health education to their daughters in the United States through a focus on the timing, content, and socio-cultural factors influencing communication.

Kafuli Agbemenu is serving as the first and corresponding author. Please feel free to contact her with any questions that may arise.

Respectfully,

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7.2 ABSTRACT

Purpose

This study describes the experience of African mothers living in the United States concerning their provisions of reproductive health education (RHE) to their daughters aged 10–14 years. Specifically, this study examined not only the timing and content of the RHE, but also the socio-cultural context that influences the mother-daughter communication involved.

Design

This study used a qualitative descriptive design. The sample included 20 African immigrant mothers living in southwestern Pennsylvania. Data were collected via demographic surveys and one-on-one interviews. Interviews were conducted from March to July, 2014.

Method

Quantitative data were analyzed using IBM PASW Version 22. Interviews were transcribed verbatim and coded. Qualitative data were analyzed using qualitative content analysis.

Findings

Twenty African immigrant mothers were interviewed. Twenty-five subthemes were identified, which were related to three main themes: mothers' RHE in their country of origin, mothers' reproductive health communication with their daughters, and changes due to the move to the United States.

Conclusion

Most African immigrant mothers did not receive factual based RHE growing up. Scare tactics were used to prevent adolescent sexual risk behaviors. Mothers were also exposed to several myths and taboos involving menstruation, sexual intercourse, pregnancy, and STIs, including HIV/AIDS. Despite these barriers, mothers were able to provide RHE to their daughters.

Conversations were bidimensional and were mostly triggered by daughters' exposure to RHE information. Because mothers received RHE between the ages of 15 to 18 years, they felt 10 to 14 years was too young to talk about RHE. This led to conversations that were very limited in content. Mothers may benefit from discussions with healthcare providers about the age-appropriateness of information.

Clinical Relevance

This study adds to the scarce literature on African immigrant mothers and how they engage in RHE with their daughters. Moreover, cultural factors influenced the timing and content of discussion.

***Keywords:* reproductive health education, adolescence, African immigrants, Africa, emigration and immigration, mothers, adolescent, sex education**

7.3 INTRODUCTION

Adolescents are highly susceptible to negative health consequences from sexual risk behaviors (Kotchick, Shaffer, Forehand, & Miller, 2001). Sexual risk behaviors include early and unprotected intercourse, having multiple sexual partners, and the use of alcohol or drugs during a sexual encounter (Childs, White, Hataway, Moneyham, & Gaiosio, 2012). Negative health consequences from sexual risk behaviors include unintended and unwanted pregnancy and sexually transmitted diseases. These behaviors can be mitigated through interventions such as in-school sex education programs and parental instruction on reproductive health issues (Akers et al., 2011; Agbemenu & Schlenk, 2011; Wamoyi, Mshana, Doyle, & Ross, 2012).

Parents are often reluctant to talk to their children about reproductive health issues (Nganda, 2008). They may believe that talking about reproductive health will encourage children to engage in sexual activity (Mbugua, 2007). However, research shows that talking to children about sexual issues leads to decreased sexual activity, delayed sexual debut, decreased incidences of unprotected intercourse, and decreased incidences of pregnancy (Kirby, 2007).

Several studies with Caucasian, African-American, and Hispanic populations in the United States indicate that mother-child reproductive health communication is especially effective in reducing adolescent sexual risk behaviors (DiIorio, McCarty, Denzmore, & Landis, 2007; Meneses, Orrell-Valente, Guendelman, Oman, & Irwin, 2006; Miller & Whitaker, 2001). To date, most research on immigrant reproductive health education (RHE) has focused on Hispanic and Asian populations living in the United States. The African immigrant population in the United States is a fast growing and underrepresented community, both in terms of immigrant health research and public health services. Parent-child reproductive health communication has not been studied in this population. There are over 1.7 million Africans in the United States,

making up approximately 4% of the foreign born population (Capps, 2011). African immigrants tend to maintain their culture once in the United States, finding ways to preserve their traditions and belief systems (Arthur, 2000). It is unclear how African immigrants negotiate their new cultural context or how they are influenced by American culture with respect to providing RHE to their daughters.

7.4 METHODS

7.4.1 Research Design

This study employed a qualitative descriptive design, with collection of demographic data such as country of origin of the mothers, education level, religion, religiosity, and marital status. The goal of this approach was to not only examine the experiences of the mothers in providing RHE to their daughters, but also contextualize the experience by examining the mothers' own reproductive health education growing up in their countries of origin.

7.4.2 Sample and Setting

Twenty African immigrant mothers participated in individual interviews. Eligible participants were African immigrant mothers who (1) had lived in their country of origin for at least 16 years, (2) had a daughter between the ages of 10 and 14 years, (3) were able to read, write, and speak English, and (4) had talked to their daughter about reproductive health issues as defined by the study. Mothers who self-reported that their daughter 10–14 years of age had a mental or developmental impairment were excluded from the study.

Interview locations were determined by the mothers to ensure comfort, privacy, and maximum flexibility. This included allowing mothers to participate via phone interviews.

Sixteen interviews were conducted at participant's homes. Three interviews were outside the home and conducted in the PI's car. One interview was conducted via telephone. Interviews were conducted until saturation was reached and no additional information was identified.

7.4.3 Procedure

Mothers underwent a telephone screening to ensure study eligibility. Once eligibility was established, an interview time and date were set. Participants received a reminder call the day before the interview was scheduled. On the initial study visit, verbal informed consent was obtained, the demographic questionnaire was completed by the participant and quickly reviewed by the PI, and then the interview was conducted. As an incentive for participation, mothers received a \$30 prepaid debit card once all study requirements were completed.

7.4.4 Data Collection

Data were collected via demographic questionnaire and interviews. The demographic questionnaire consisted of 23 questions and was developed for this study based on not only commonly collected variables (i.e., age, marital status, education level in the United States, income, and religion), but also variables relevant to the goals of the study (i.e., country of origin, reason for immigration to the United States, education level in country of origin, and age at which participant's daughter started breast development and monthly periods).

A structured interview guide was designed to ascertain mothers' experiences of RHE through their adolescent years and their RHE experiences with their daughters (see Table 3). The interview guide contained 17 questions and several probes to elicit further information. An icebreaker question commenced the interview to assist in establishing rapport with participant. The PI conducted all interviews. A maximum of 2 hours was allocated for the initial interviews. Interviews lasted 45–75 minutes. Initial interviews were doubly audio recorded. Although a structured guide was used, participants were allowed to guide the conversation and introduce new ideas and concepts. The study protocol allowed for a follow-up interview to clarify themes and ask additional questions. Notes were taken during interviews to further contextualize conversations. Interviews were conducted between March 22, 2014 and July 16, 2014.

Once initial interviews were completed, follow-up interviews were to be conducted. However, the few follow-up interviews conducted did not provide significant additional information. Additionally, one participant contacted for a follow up interview refused to answer the additional question, stating that it was a very personal matter that she did not want to discuss.

Table 3. Interview Questions with Probes

Interview Questions with Probes
<p>1. Icebreaker Questions:</p> <ul style="list-style-type: none"> -How long have you lived in Pittsburgh? -Have you lived anywhere else in the United States? -Who else lives in your house? -What languages do you speak at home? -Do you speak these languages to your children? -Which of these languages do you speak to your children? -Tell me more about that. <p>For this study, reproductive health education means talking about things related to having children—things like reproductive body parts, monthly periods, boy-girl relationships, how pregnancy happens, and how to prevent pregnancy. Thinking of this meaning,</p>
<p>2. Did you receive reproductive health education from <i>your</i> mother?</p> <p>-If yes, tell me what she told you.</p>

<p>-Tell me what topics did you talk about?</p> <p>-If no, where did you learn about reproductive health issues?</p>
<p>3. In general, tell me about how boy girl sexual issues were talked about in (country of origin)</p> <p>4. Did you hear of any myths or taboos about sexual matters as you were growing up? (If yes), tell me more about that.</p>
<p>5. Did girls you knew growing up get pregnant?</p> <p>-If yes, what happened?</p> <p>-How did you find out?</p> <p>-How was it dealt with?</p> <p>-Did you tell your mother about it?</p>
<p>6. Did girls you knew growing up get a sexual disease?</p> <p>-If yes, what happened?</p> <p>-How did you find out?</p> <p>-How was it dealt with?</p> <p>-Did you tell your mother about it?</p>
<p>7. What do you think about mothers providing this kind of education to their daughters?</p>
<p>8. Why might a mother give her daughter reproductive health education?</p>
<p>9. How old is your daughter?</p>
<p>10. Have you talked to her about reproductive health issues?</p> <p>-If YES, how old was your daughter when you started talking to her about sexual health issues?</p> <p>-How did you feel when discussing sexual issues with your daughter?</p> <p>-Tell me the about the setting where these discussions took place. -By that I mean, where were you when you had these talks? At home? In a social setting?</p> <p>-Tell me more about what you talked about. Who asked first, about sexual health issues?</p> <p>-What led to the discussion? So how did the conversation start?</p> <p>-So, do you feel you gave her enough information?</p> <p>-Do you think the information was accurate?</p> <p>-If No, why? -At what age do you think you should start these talks?</p> <p>-Do you think these talks should be started?</p> <p>-Why that age? Do you think this was too late, or too early?</p> <p>-What would you talk about?</p>

- Who should start the discussion?
11. Is there anyone else in your household who has provided reproductive health information to your daughter?
-Tell me more about that. How did you find out? Do you know what was discussed?
12. Has she started to develop breasts? -If YES. Okay, can you look at this picture and tell me what stage she is in? (show Tanner stage pictures).
13. Has she started her menses/monthly periods? If YES, how old was she when they started?

7.4.5 Data Analysis

Descriptive statistics were computed using SPSS (version 22.0, IBM, Inc., Chicago, IL) for all quantitative variables. Qualitative data from the interviews were analyzed using content analysis. This is a low inference methodology that not only allows the phenomenon to reveal itself without manipulation, but also does not place limitations on the outcomes of the research. Analysis began after some interviews were conducted. Qualitative data were stored and managed in NVIVO10, a software program designed for the collection, organization, and analysis of very rich text-based or multimedia information (QSR International, 2013). Data collection, coding, and analysis occurred concurrently with the PI and second coder, a doctoral- prepared qualitative expert, reviewing transcripts to develop codes.

Qualitative content analysis approach employs a quasi-statistical style of counting to describe patterns and regularities in the data (Sandelowski, 2000). To develop codes, the PI and second coder met and reviewed the first interview transcript. Common ideas were identified. The PI later defined the ideas based on commonly used phrases and the study goals and aims. All interview transcripts were independently reviewed by the PI and second coder, who together reached a consensus on codes after conversation. These initial codes were used when reviewing the second interview transcripts. Several code additions and revisions were made. The third

version of codes was used for interview three. The list of codes and definitions that was developed were further refined through the review of each interview. Modifications and additions were again made before coding interview four. In all, five revisions were made to finalize the code list, which was then used to code the 16 remaining interviews.

7.5 RESULTS

Twenty African immigrant mothers from seven African countries participated. The countries (and the corresponding number of participants) were Nigeria ($n = 10$), Kenya ($n = 4$), Guinea ($n = 2$), Ghana ($n = 1$), Zambia ($n = 1$), Liberia ($n = 1$) and South Sudan ($n = 1$). (see Figure 3). The mean age of the mothers was 42 years (range = 30–55 years). The mean age of mothers when they gave birth to the daughters discussed in this study was 30 years (range = 19–42). The mothers had lived in the United States an average of 13.7 years (range = 2–28 years). (see Table 4). Furthermore, the mothers were well educated, with 95% having some college education and higher. Most were married (80%) and Christian (90%).

Seventeen mothers moved directly from their country of origin to the United States. Three moved from Belgium, Kenya, and the United Kingdom to the United States, where they had lived for 1 to 23 years. Seventy-five percent ($n = 15$) of the mothers had lived in an urban area or big city in Africa. The green card lottery enabled 45% ($n = 9$) to immigrate to the United States. Nine came on a student or visitor's visa, and one came as a refugee. Ten mothers (50%) said that they visit their country of origin regularly. Definitions of *regularly* included “every year,” “every 2 years,” “every 4–10 years,” “every year since 2011,” “once since 2007,” and “twice since 2004.”

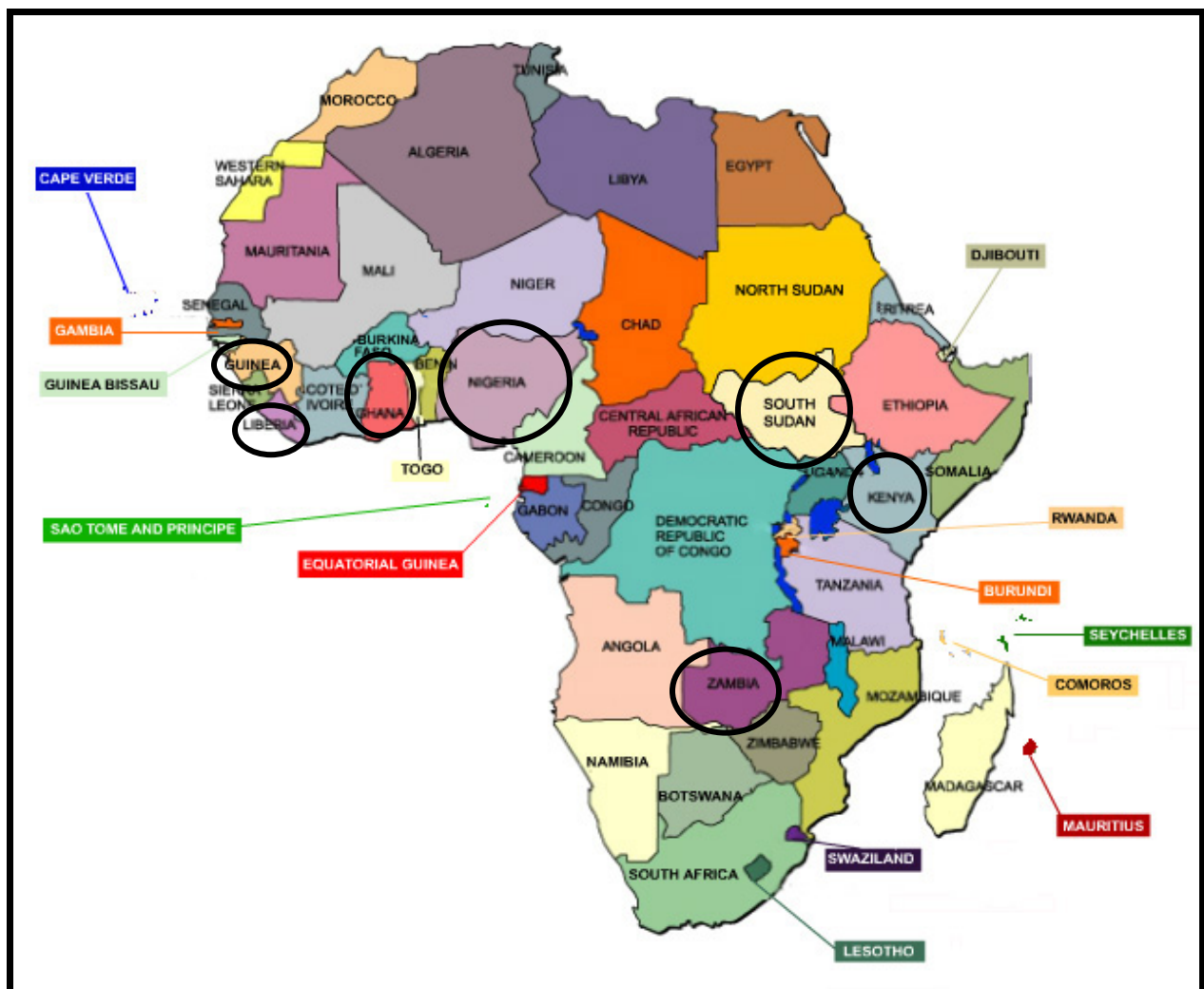


Figure 3. Dissertation Study: Participants' Countries of Origin

Table 4. Demographics Frequency Table

Variable	Mean (SD)	Range	Minimum	Maximum
Mother's current age (n = 20)	42 (6.2)	25	30	55
Years lived in the United States (n = 20)	13.7 (6.4)	26	2	28
Mother's age at birth of daughter	30.0 (6.6)	23	19	42
Age of menarche for daughter (n = 15)	11.83(1.3)	4	9	13

Daughters

Twelve (60%) of the daughters were born in the United States, four in Nigeria, three in Kenya and one in Zambia. Their mean age was 12.1 years. Fifteen of the 20 daughters had started monthly periods; the mean age at menarche was 11.8 years.

7.5.1 Subthemes

Twenty five sub themes were identified. They focused on mothers' reproductive health experiences in country of origin, mothers' reproductive health communication with daughter and changes due to U.S. move (see Table 5). The twenty five sub themes built up to three themes.

Table 5. Sub Themes Identified from Coding Interview Transcripts

1. Experience Describes moms' actual experience of receiving RHE while growing up, in her country of origin.
2. Timing Describes (1) situational triggers and (2) age of daughter when mother began to provide RHE
3. Setting Refers to venue in which mother provides RHE to her daughter (i.e., at home, in the car, or at a social event).
4. Content of RHE Indicates topics included in the study's definition of RHE that are discussed by the mothers (topics of human sexual anatomy, sexual reproduction, puberty, sexual relationships, abstinence and birth control). Including: monthly periods, abstinence, detailed information on the menstrual cycle, menstrual hygiene, condoms, contraceptives, age of maturity.
5. Cultural Factors Discusses the influence of culture on communication
6. Socio-cultural context Describes the set of African-influenced beliefs, traditions, practices, and actions of African immigrant mothers, in regards to RHE.

7. Myths A widely held but false idea about sexual health issues.
8. HIV/AIDS Refers to conversations and practices around HIV/AIDS as a mother was growing up, and in communication with her own daughter.
9. STIs Mothers' report of exposure to and talk about STIs (e.g., gonorrhea, syphilis, and herpes).
10. Taboos A reported sexual behavior prohibited or restricted by social custom.
11. Mothers' report of teen pregnancy in country of origin Describes mothers' report of discovery and reaction to other girls teen pregnancy while growing up. Includes hidden pregnancies, abortions, school drop outs, disgrace to family, running away from home, and public disgracement.
12. Mothers' RHE source Where mother got RHE from (i.e., own mother, auntie, friends, media, or school).
13. Mother's RHE conversation content Discusses content of RHE conversation moms had growing up, with her mother, friend, other adult or school
14. RHE source for daughter Discusses source of RHE for daughter (e.g., mom, auntie, grandmother, extended family member, or school). Also, mention of dad not being a source of RHE.
15. Sexual issues in country of origin Mom's report of how boy-girl sexual issues were discussed, handled, or managed in country of origin (i.e., sexual abuse, predatory "teacher-student" and exploitative relationships- "sugar daddy," and female genital mutilation).
16. Daughter's development Describes social (i.e., daughter involved in relationship with boy, maturation, make-up use, cell phones and social media use) and reproductive development (includes breast development- tanner stage, age when monthly periods and growth of public hair if mentioned by mom) of daughter.
17. Mom's additional desired RHE topics Additional RHE topics mom reported, during the interview, wanting to discuss with daughter. E.g. HIV/ AIDS and STDs.
18. Reported daughter's response to RHE Describes mom's report of daughter's response to RHE- embarrassed, empowered etc.
19. Values Values instilled by mom to daughter (i.e., focus on academics, self-sufficiency, female empowerment, and independence).
20. Raising independent women Mothers' description on how to raise "independent women."
21. Mother's beliefs, attitudes and opinions about RHE for daughters Describes mothers' thoughts on the positives and negatives associated with providing their daughters with RHE. Also describes mothers' feelings, thoughts, judgments, attitudes, and beliefs that emerged as a result of engaging in reproductive health communication with the daughter and why RHE might be provided.
22. Adequacy and accuracy of mother-daughter RHE Discussion on whether RHE mother or another source provided was sufficient

<p>23. Changes due to move to United States Moms' report of cultural changes due to move to the US. (Time, Family support, clothes, freedom of speech).</p>
<p>24. Reported U.S. norms Mothers' report of believed U.S. cultural and social norms</p>
<p>25. Additional RHE concerns brought up by mom when prompted Additional RHE topics/concerns mentioned by mother towards the end of the interview (e.g., same-sex relationships, blending cultures, and how to recognize change in behaviors of daughter).</p>

7.5.2 Themes

Three themes emerged: (1) mothers' RHE experiences, (2) mothers' RHE conversations with their own daughters, and (3) mothers' perception of RHE change due to living in the United States.

7.5.2.1 Mothers' RHE Experiences

This refers to how study participants received RHE. It also includes discussions on RHE sources, exposure to teen pregnancy, and STIs in mothers' countries of origin.

Mothers tended not to have received detailed RHE from their own mothers because it was considered culturally inappropriate. Scare tactics were often used to discourage adolescent sexual activity. One mother said that

my mum, however, would scare me, like now you are a woman, if you go close to any man, men touching you, that's the way they scare us, anyway, back home in Nigeria they will be like if any man touches you, you are gonna be pregnant, just so that you, that would scare you, you know, from getting involved with a boy . . . (Mom Janet, Nigeria, July, 16, 2014)

Reproductive health conversations reported by the mothers tended to be one-sided, with information being conveyed by parent to child. Children were neither encouraged to ask

questions, nor were questions answered with factual knowledge. This unidimensionality of conversation has been reported by Izugbara (2008), which suggests that attitudes evolve slowly and are influenced more by culture than by the passage of time.

Almost every mother reported knowing of a teen pregnancy while growing up. Consequences of teen pregnancy described by mothers included school discontinuing, public shaming, and being disowned by family. For example, one mother recounted

I remember they disgraced [the pregnant girl] and they made all these girls follow her on the street, they were saying follow her and this is what will happen to you when you do this thing to your parent, you know Out of the family and out of the house, maybe she went to live with the person that got her impregnated you know, they send you out of the house, you go and live with the family of the boy We had this can, I remember this pink can and we're singing, do you know . . . and they made us do this is what happened to you if you don't listen to your parents (Mom Keke, Nigeria, June, 06, 2014)

In a related story, another mother said

so when I had my period, I told my mom, and my mom said, "okay, become a woman, this is what you do, you can't sleep with a boy. You sleep with a boy; you get pregnant; you get pregnant, you cannot be in the family, it's a disgrace (Mom Auntie, Ghana, June, 16, 2014)

Disgracing family and discontinuing school were the most often cited consequences of teen pregnancy. This is very common in African countries where pregnant girls do not continue with school due to shame or failure of school continuation policies (Oyaro, 2008; Kabiru & Orpinas, 2009). School continuation policies refer to recent legislation in some African countries, like Kenya, that allow girls to resume school once they have had the baby (IRIN, 2008). Prior to the introduction of these school continuation policies, pregnant girls were expelled (IRIN, 2008). There was no option to return after giving birth. Several myths and taboos associated with sexual issues were identified in our interviews. Myths revolved around menstruation, sexual intercourse, abortion, and STIs.

While most mothers told of an experience with teen pregnancy when growing up, almost none recounted having known someone with an STI, including HIV/AIDS. The reason for this is

that STIs can be hidden. Mothers who grew up in rural areas might not have known the name for HIV/AIDS, but they were, nonetheless, familiar with its symptoms. One mother reported

In fact about HIV I never heard about any, too much back home I never heard about it but when I came here [United States], I heard about it a lot, you know that I came over here and heard about it a lot but back home I never heard about it a lot (Mom Dawn, Liberia, June, 07, 2014)

Another mother recounted

I was so naïve, I wasn't aware of any disease that could kill you per se, you know what I mean, HIV. Am gonna be forty four at the end of July so I, back then HIV was not talked about as much as it is now (Mom Nan, Guinea, June, 18, 2014)

In another interview, we were told

because she looks healthy it doesn't show on her body. So it was later on that it start like showing. She's slimming. Yeah, she passed away this year (Mom Fulera, Nigeria, June, 28, 2014)

Although most mothers received RHE from their own mothers, RHE was also provided by schools, aunts, and, in two cases, by fathers. This is very unusual as RHE in African communities is typically delivered along gender lines (Biddlecom, Awusabo-Asare, & Akinrinola, 2009; Izugbara, 2008; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Mbugua, 2007). Fathers who offered RHE were college educated, either in the United States, Canada, or Britain, and they gave more detailed and more factual information than did mothers. Fathers did not rely on scare tactics. For example, one mother explained

coz my mother, it was like forbidden, can't talk, but knowing my father, being around the world, he is more open to it so he sat down and told me and he spoke, he was honest . . . told me everything about being careful with men actually, like how not to get pregnant . . . and he did not encourage me to like have sex, like to use condom if am gonna do it, what he told me is like to completely stay away from it until I get married, that was his point, you know, even kissing, he didn't want me to kiss any boy (laughs) . . . so he sat down and talked to me about it and I did understand and I heard him which I didn't do it to like, you know what I mean, I abided by what he told me (Mom Kitty, Nigeria June, 04, 2014)

Another mother told us

when I saw my first period, I actually told my dad because I was very close to my dad My dad educated me because he was he was a learned person He would talk to me about puberty . . . talk to me about when I first start my first period he told me and he took me to the supermarket and bought me the sanitary pads My mum would scare me, like now you are a woman, if you go close to any man, men touching you that's the way they scare us anyway back home . . . my dad would, you know, sit me down and educate me, show me pictures of what a uterus looked like, you know, how, all those things, because he was really educated (Mom Janet, Nigeria, July, 16, 2014).

Three mothers talked about female genital mutilation/cutting (i.e., circumcision (FGM/C). FGM/C refers to “procedures that intentionally alter or cause injury to female genital organs for non-medical reasons” (WHO, 2014). Over 125 million girls and women have been cut in the 29 countries in the Middle East and Africa where FGM/C is concentrated. It is done as part of their tradition/culture, to keep women from being promiscuous, as a rite of passage into womanhood and as a requirement for marriage (Karanja, 2003; UNICEF, 2013; WHO, 2014). Countries with the highest level of support for FGM/C include Mali, Guinea, Somalia, and Gambia (UNICEF, 2013). With the exception of Zambia, all mothers in the study were from countries known to practice FGM/C. One mother mentioned living in a region where FGM/C was practiced:

I came from a rural area where there was even FGM . . . for instance that happened mostly in August. After August when we came back to school there would be girls who went for circumcision ceremonies and if you did not, you would be like an outcast to them. They will separate you from their group and mostly these were girls who felt like they were mature and they would talk mostly about that side of things (Mom Tulip, Kenya, April, 05, 2014)

The two mothers from Guinea narrated their experiences undergoing FGM/C:

I was exposed to that, I shouldn't have. My personal experience because usually the Christians Catholics don't do it but my mum being educated as she was . . . and all that was influenced by her mother so “ooh you gotta do that, you have to do that, your daughter needs to have that removed” . . . so I had to go through it . . . my dad, nobody knew, like my dad, he would have flipped and that that made me mad . . . I went to my grandma's for summer and it was practiced every summer because girls were out of

school. They are terrible. Terrible, terrible, terrible Yeah, it was, it's sad, I hope they do it less now, you know (Mom Annette, Guinea, July, 10, 2014)

I was maybe . . . 10 or 11 . . . I wasn't living with my parents. One of my aunts came to get me, she said that I was going to see my mum . . . I was taken to a cabin by her house, my aunt's house . . . I was [with] my aunt and another lady . . . she said "you know you are not with your mum but when you become a woman this is what we do, this is what we need to do." So I was held down, put on you know those . . . but there is no mattress on it... so I was put on there, I was held and...something was put in my mouth like . . . tissue, and they cut me with scissors . . . I wasn't given any, nothing, it just was all natural . . . I stayed at my aunt's house until I was healed. But it took longer because I bled a lot. I lost a lot, a lot of blood and that's when also she came up with some traditional mix and she gave it to me to put there coz I was bleeding, when I say full blood clot like this big (holds up her fist) so I was passing out . . . so once those herbs or whatever it was, was put there, the bleeding did stop, I think I stayed there close to a month . . . I was very sick. I retained a lot of weight, my belly was big because I wouldn't urinate coz it hurts for days and when I finally did, it burnt, it was painful and I was bleeding so I mean my belly looked like I was pregnant (Mom Nan, Guinea, June, 18, 2014)

FGM/C was done against their will. Parents of both mothers were well-educated and traveled internationally. For these mothers, FGM/C was done against the wishes of their parents. Mothers suffered physical and psychological trauma as a result of the procedure.

7.5.2.2 Mothers' RHE conversations with their daughters

In mothers' conversations with their own daughters, we see shifts in attitudes, beliefs, and practices. Most study participants did not receive factual RHE from their mothers. However, all participants made an effort to provide RHE to their daughters, with varying amounts of detail and content.

RHE conversations were typically initiated by the daughter. This is in stark contrast to what we see in the literature about parent-child sexual communication in select African countries (Emelumadu et al., 2014; Kumi-Kyereme, Awusabo-Asare, Biddlecom, & Tanle, 2007; Lebeso, Davhana-Maselesele, & Obi, 2010; Mbugua, 2007; Poulsen et al., 2010; Vandenhoudt, 2010). This was also very different from mothers' own experiences. Conversation generally took place

at home, triggered by an experience the daughter had. The most frequently cited experiences included having sex education classes in school or the daughter having a female friend who had a boyfriend. None of the mothers reported initiating RHE because of the daughter displaying sexual behaviors.

This study defined RHE as information provided by mothers to daughters on the topics of human sexual anatomy, sexual reproduction, puberty, sexual relationships, abstinence, and birth control. Majority of participants limited their RHE to discussions of abstinence, monthly periods, and how pregnancy occurs. Abstinence until marriage was expected. Prevention of teen pregnancy was stressed to ensure achievement of educational goals. Five mothers made some reference to birth control, but they reported no detailed conversations with their daughters. Mom Lola (South Sudan, May, 02, 2014) recounted “throwing” condoms on her daughter’s bed. According to Lola, this was not in a response to her daughter’s behavior, but in response to her daughter having a female friend who had a boyfriend. Mothers did not talk much about STIs, although one mother admitted to deliberately giving false information on STIs and HIV/AIDS as a tactic to stop sexual risk behaviors:

I guess I remember, I say “hey, if you kiss a boy you are going to get AIDS, you know” . . . I’ve said things that I don’t have to say, but just to tell her, not to make her to do anything. I’ve said that, “you know, boys are full of germs, you kiss them,” I didn’t say AIDS but I said, “you gonna have STDs, yes, you know there are STDs” (Mom Auntie, Ghana, June, 13, 2014)

However, they maintained a hesitation to fully discuss RHE with their daughters. In our interviews, mothers admitted to being “uncomfortable” and “embarrassed,” viewing more detailed RHE as “not age-appropriate”. Considering that most of the mothers that we interviewed had received RHE between the ages of 15 and 18, they felt 10–14 years old was too young to begin talks with daughters.

7.5.2.3 Mothers' perception of RHE changes due to living in the United States

Mothers were asked how RHE conversations had changed living in the United States. Overall, they considered U.S. society more liberal about sexual issues and thought boy-girl relationships in the United States start too early. Moms also acknowledge the increasing influence of the Internet, television and social media on adolescent sexual relationships. Because of these factors, mothers stated they provided more RHE, earlier, than they would have in their countries of origin.

back home the difference is ... like I told you, to us our culture that's not something that you are supposed to do [have sex] until you get married but here when I first came to this country, it's just amazing like some of the girls, I have a neighbor over there like to her it was so exciting for her daughter to have a boyfriend even at the age of eight years old. I found it so weird to me, but to them here, to them. . . to them it's just nothing. . . my daughter too she has a friend since she was in elementary school, she [daughter's friend] told them that she did have sex with her boyfriend but now they are no more. . . the mother knows about it that her daughter had sex with this her boyfriend and she is happy with it, but to me, in my culture to me that's forbidden, that's something that is not supposed to be done. . . . (Mom Kitty, Nigeria, June, 04, 2014)

The media in America is so open. I don't know what she watches I think she watches everything, because everything in on the internet . . . and it's not even good . . . the internet, television. They bring very bad programs for kids and you can't control what they watch and they have a television in their bedroom. . . . (Mom Florence, Kenya, April, 02, 2014)

It's just that I don't tell her the reproductive or something, she know it because they see it here on TV. Though I don't like them to watch like kind of movies – but there are some certain things, like advertisement – they see something that they are not supposed to see it, so you can't hide everything They have a computer with the internet and in the computer . . . maybe sometimes they might go and see something (Mom Fulera, Nigeria, June, 27, 2014)

7.5.2.4 Additional RHE concerns expressed by mothers when prompted

We asked mothers about additional RHE topics/concerns towards the end of the interview. Concerns included how to talk to their children about same-sex relationships, how to blend elements from their culture and U.S culture, and advice on recognizing behavior changes in their daughters as they approached adolescence.

Like back home we are still drawn with culture. . . But here the culture is kind of blend into American culture. Now, I usually tell them it's very good because you make a choice of what you wanna choose. You have the background culture. And you have what you see here, so you see what you want to reinforce on your daughters. I always tell them . . . this is your tribe you come from this, this is our culture and according to your culture this is what we do. But also she has the westernized world – what they believe. So we come to a conclusion how do you want to get it done. . . .(Mom Mary, Kenya, March, 22, 2014)

Behavior, maybe something about behavior. . . How you supposed to know if your child starts changing and how you supposed to read what's going on through their mind as a mom, as a parent (Mom Lola, May, 02, 2014)

7.6 DISCUSSION

Being a first or second generation immigrant has been identified as a risk factor for initiation of sex in adolescents (Jimenez, Potts, & Jimenez, 2002; Kirby, 2007). An effective protection from sexual risk behaviors is mother-daughter RHE (Crosby, Hanson, & Rager, 2009; DiIorio, McCarty, Denzmore, & Landis, 2007; Hutchinson, Jemmott, Jemmott, Braverman, & Fong, 2003; Hutchinson et al., 2012).

By using a qualitative descriptive approach, we examined how African immigrant mothers engage in RHE with their daughters, and this is the first study that targets the content,

timing, and setting of RHE African immigrant mothers give their daughter aged 10–14 years. Based on the literature of similar studies conducted in African countries, we hypothesized that mothers would not be willing to talk about RHE because of the conservative nature of African society. However, our results indicate otherwise.

An evolution in content is seen in the African immigrant mothers' conversations with their daughters. The mothers we interviewed tended to provide more RHE than they had received while growing up. Conversations were bidimensional, meaning that there was an exchange of information between parent and child. Conversations were largely triggered by the daughters' environmental interactions. *Environmental interactions* refer to places where daughters were exposed to some aspect of reproductive health. Reported environmental interactions took place in school, while watching television, with friends, and out in the community. The most noted trigger was a daughter receiving RHE in school. When this occurred, mothers were open to continuing the discussion, and they provided factual information. Few mothers used scare tactics as a behavior change technique. Mothers also reported using books and videos to improve RHE.

Ninety percent of the mothers we interviewed reported being religious (i.e., Muslim, Protestant, and Roman Catholic), but their religious views did not inhibit conversation with their daughters, as had been noted in similar studies in African countries (Mbugua, 2007; Nganda, 2008). Mothers understood that teenage pregnancy can be prevented by RHE and, therefore, willingly offered it.

Although RHE was given, we observed from the interviews that mothers did not report extending conversation to building healthy boy-girl relationships. It appears that mothers engaged in RHE specially to prevent teen pregnancy. This seemed to be the most important concern because STIs were seldom talked about. The most often mentioned reason to prevent teen pregnancy was to achieve educational goals. Mothers spoke of daughters going on to pursue

higher education. Whether or not daughters wanted to go to college is unknown. This emphasis on educational attainment is consistent with Arthur (2000), who characterizes the importance of education in the African immigrant community as a “pathway to social mobility and economic advancement” (p. 7). Even though the United States has several support services for pregnant teenagers, and the ability to continue school after having a child is guaranteed through federal policies, mothers do not talk to their daughters as if this is an option. According to our interviews, mothers continue to talk about teen pregnancy as “ruining your life” (Mom Funky, Nigeria, April, 04, 2014) or “ruining your education” (Mom Auntie, Ghana, June, 13, 2014).

Overall, our study comprised participants who were well-educated (95% had some college education and higher) and married (80%). Participants were able to adapt to multiple cultures to create a mix of personalities (Arthur, 2009). Fifty percent of the mothers we interviewed also work in healthcare. The mothers who participated in our interviews maintained crucial elements of their culture, including language, food, clothing, and communication styles. None reported passing on the myths and taboos on sexual matters that they had been exposed to growing up.

Limitations of this study included (1) obtaining 50% of study participants from only one African country (i.e., Nigeria) and (2) conducting the study in English. This restricted diversity of research participants. The study was also rather homogeneous in terms of the participants’ education, religion, socioeconomic status, and immigration status. We were unable to enroll participants from the Burundi, Congo, and Somali communities in Pittsburgh due to language restrictions. These communities make up a significant portion of the African immigrant community in Pittsburgh. Consequently, our findings may be more representative of mothers from Nigeria and may not represent the varied African immigrant communities in Pittsburgh. However, it was not the intention of this study to be generalizable; rather, our goal was to give

voice to a population that is often marginalized and seldom represented in research studies, despite its increasing size in the United States.

7.7 IMPLICATIONS FOR NURSING

By exploring African immigrant mothers' experiences engaging in RHE with their daughters, we can better understand the cultural context that influences their RHE communication. Mothers in this study had been subjected to female genital cutting. This is not a typical American experience and may alter how these mothers engage in RHE with their daughters. Our findings can also help guide healthcare providers in their interactions with African immigrant mothers who have daughters aged 10–14 years. This study also provides the impetus to conduct a larger study with a sample more diverse in terms of culture, religion, education, and socioeconomic status.

7.8 ACKNOWLEDGEMENTS

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7.9 CLINICAL RESOURCES

Advocates for Youth: <http://www.advocatesforyouth.org/parents-sex-ed-center-home>

Migration Policy Institute: <http://www.migrationpolicy.org/research/CBI-african-migration-united-states>

The National Campaign to Prevent Teen and Unwanted Pregnancy:
http://thenationalcampaign.org/sites/default/files/resource-primary-download/protective_factors_matrix.pdf

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8.0 MANUSCRIPT #3: "SEX WILL MAKE YOUR FINGERS GROW THIN AND THEN YOU DIE": THE INTERPLAY OF CULTURE, MYTHS, AND TABOOS ON AFRICAN IMMIGRANT MOTHERS' PERCEPTIONS OF REPRODUCTIVE HEALTH EDUCATION WITH THEIR DAUGHTERS AGED 10–14 YEARS

8.1 COVER LETTER TO JOURNAL EDITOR

November 12, 2014

Dear Editors and Reviewers,

Please consider the attached manuscript, “‘Sex will make your fingers grow thin and then you die’: The interplay of culture, myths, and taboos on African immigrant mothers’ perception of reproductive health education with their daughters aged 10–14 years” for publication in the *Journal of Transcultural Nursing*. Through qualitative methods and interviews, this paper describes how African immigrant mothers perceive their move to the United States and how it has changed the way in which they communicate with their daughters about reproductive issues. The mothers’ perceptions of the social constructs of acculturation are also addressed.

Kafuli Agbemenu is serving as the first and corresponding author. Please feel free to contact her with any questions that may arise.

Respectfully,

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8.2 ABSTRACT

Background

The purpose of this paper was to examine the convergence of culture, myth, and taboo about reproductive health issues to which African immigrant women, who currently reside in the United States, were exposed while growing up in their countries of origin. This study also sought to understand their perceptions influenced the reproductive health education (RHE) they provide to their daughters aged 10–14 years.

Methods

Twenty African immigrant mothers in the United States were interviewed about the myths and taboos on pregnancy and sexually transmitted infections they heard growing up in their various African nations of origin. Qualitative content analysis was used to collect and examine data.

Results

Mothers reported myths and taboos that related to menstruation, sexual intercourse, pregnancy, and HIV/AIDS.

Discussion

Although several myths and taboos were reported, they did not appear to influence the RHE that mothers provided their daughters. Differences in U.S. culture vis-a-vis their countries of origin compelled most mothers to provide more education than they would have in Africa.

***Keywords:* African immigrants, reproductive/sexual health education, adolescents, culture, Africa, emigration and immigration, mothers, adolescent, sex education**

8.3 BACKGROUND

The African immigrant population in the United States is steadily increasing. The last census reveals that there are approximately 1.7 million documented African immigrants in the United States, making up 4% of the foreign born population (Capps, 2011). African immigrants come to the United States and, over time, adjust to the culture they experience in the United States and undergo a simultaneous process referred to as *acculturation*.

Acculturation is the process through which individuals who have grown up in one cultural environment are able to adapt to new environments that result from migration and exposure to a majority population (Berry, 1997). Acculturation is measured using several social constructs including nativity, country of birth, language proficiency and writing, length of residence in country of immigration, immigration status, media language preference, food choices, and social contact with friends of the same ethnic or national group (Acevedo-Garcia, 2004; Akresh & Frank, 2008; Berry, 1997). However, undergoing the process of acculturation neither negates the culture of origin nor its attendant and continued beliefs in myths and taboos concerning various issues (Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006).

Myths and taboos about sexual issues are widespread in African countries. Myths and taboos about sexual issues are propagated in an effort to control sexual behavior, especially the sexual behavior of unmarried people and—even more so—women. In this study, *myth* is defined as a widely held but false belief in something—in this case, sexual issues. This definition is congruent with Amanze's (2010) description of the creation myths of African people in which the development of human sexuality emerges. In this study, *taboo* is defined as reported sexual behavior prohibited or restricted by social custom. This study further describes *reproductive health education* (RHE) as talking about topics related to having children such as reproductive

body parts, monthly periods, boy-girl relationships, how pregnancy happens, and how to prevent pregnancy.

In order to understand factors that influence how African immigrant mothers living in the United States provide RHE to their teenage daughters, an examination of the sexual myths and taboos they grew up with in their various African countries of origin was conducted.

8.4 METHODS

This study utilized a qualitative descriptive approach. This is a low inference methodology that allows for the interpretation of the phenomenon without modification. It is useful for analyzing phenomena for which we have little research or studying marginalized populations (Sandelowski, 2000). The study was approved by the Institutional Review Board at the University of Pittsburgh.

Data were collected via a questionnaire that included several questions on some of the social constructs of acculturation (e.g., length of stay in the U.S., country of origin and religion) and in-depth semi-structured interviews.

Questionnaires were administered in paper form. There were 23 questions on variables such as nativity, years in the United States, age, marital status, educational status, income, and occupation. Questionnaires were designed at a sixth grade reading level. Descriptive statistics from the questionnaires were calculated where relevant, which included means, range, frequencies, and standard deviations.

An interview guide was developed from the literature on parent-child sexual health communication in select African countries. Questions included (1) myths and taboos about

sexual issues that mothers were exposed to in their countries of origin and (2) changes in reproductive health communication with daughters due to the move to the United States. Interviews were double audio recorded and transcribed verbatim. Qualitative content analysis was used for the interview data. This approach employs a quasi-statistical style of counting to describe patterns and regularities in the data (Sandelowski, Barroso, & Voils, 2007). Transcripts were then reviewed one at a time and coded independently by the study PI and qualitative study expert.

Study participation was completed in one visit, which was a maximum of 2 hours in length. Consent was established via a verbal consent form, and mothers with a copy of the form. The questionnaire was completed and immediately reviewed by the PI to ensure completion. A structured interview was conducted last.

8.5 RESULTS

Twenty immigrant African mothers participated in this study from Pittsburgh, PA. Mothers were from seven different African countries. These countries (and the corresponding number of participants) were Nigeria (n = 10), Kenya (n = 4), Guinea (n = 2), Ghana (n = 1), Zambia (n = 1), Liberia (n = 1) and South Sudan (n = 1). The mothers were recruited through advertisements placed in African businesses and organizations and by word of mouth. Mothers ranged in age from 30 to 55 years and had lived in the United States for an average of 13.7 years (range = 2–28 years). Eighty percent were married, and 95% of participants had some college education or higher. Seventy-five percent (n = 16) were Christians, 10% Muslim (n = 2), and 10% chose not to answer this question. Sixty-five percent of daughters were aged 12–13 years. Overall, this was a rather well educated sample of African immigrant mothers who primarily

emigrated to the United States for better financial and educational opportunities. Only one mother in the study self-identified as a refugee.

Four themes were identified in relation to African immigrant mothers' perceptions of how their move to the United States influenced RHE they provided to their daughters aged 10–14 years: (1) taboos, (2) myths, (3) changes due to their move to the United States, (4) and reported U.S. norms. Mothers were asked to recount myths and taboos about sexual matters that they heard growing up in their countries of origin. The study defined myths and taboos, but mothers were permitted to provide examples based on their own definition of a taboo or a myth.

Taboos

Most mothers denied knowing of any specific taboos related to sexual issues; however, sexual issues in general were considered taboo. Talking about sexual issues was even more taboo, as recounted by one mother:

all I know is the—my parents wouldn't talk to me about sex. It was just a taboo, like "hey, don't talk about that," yeah, "you're not grown enough to talk about or to know about all that. All you need to know is you have sex with a boy you're going to get pregnant; it's a disgrace to the family; it's a no no; you don't do that." And that's the end, so there was no taboo—yeah, in a way that's a taboo, you know, you don't talk about it, you don't question it. Just don't do it. Just don't do it. (Mom Auntie, Ghana, June,13, 2014)

Reproductive health issues were not only discussed with great reluctance, but also mostly by mothers in unidirectional conversations. Fear tactics were used to ensure that teenage girls remained abstinent until marriage. Homosexuality and talking about reproductive parts in public were also considered a taboo. One mother said

what they say is the boy, if you allow a boy to touch you, then you will be pregnant. But like that was the way my mom put it. (Mom Yety, Nigeria, June, 04, 2014)

Another mother explained that

homosexual is a taboo, we don't even know anything like that, homosexual is was a big taboo up to now in my country so that's number one, number two you don't talk about

private body parts, like, you know, intimate body parts in public. That's what it means when you talk about body parts publicly just uselessly. (Mom Janet, Nigeria, July,16 , 2014)

These findings are congruent with present day reports on parent-child communication on sexual issues in some African countries (Biddlecom, Awusabo-Asare, & Akinrinola, 2009; Izugbara, 2008; Nganda, 2008; Mbugua, 2007). It is considered taboo to talk about sexual issues, and parents talking to children about sexual health issues is even more taboo. Considering that the attitude towards sexual health conversation had not significantly changed indicates that communication is influenced more by cultural factors than by the passage of time.

Myths

In an early interview, one mother mentioned that she did not know the meaning of the word myth. Therefore, myths were defined as widely held but false ideas about sexual health issues, and an example of a myth was then incorporated as an interview prompt for future interviews.

The myth from Cameroon,said drinking a glass of your urine every day will prevent HIV/AIDS. This is a myth that had been reported to the PI prior to study commencement. The woman who reported the myth was an African immigrant mother who at the time had lived in the United States for approximately 7 years.

Four categories of myths were identified: those related to menstruation, to sexual intercourse, to pregnancy, and to HIV/AIDS. Myths were most often linked to living in rural areas. For example, one mother recounted

I grew up in the city. You know, so really people don't talk much about myths there when it comes to sexual matters. It was very point-blank "this is what happens, this is." There were no, there were no—I can't think of any . . . (Mom Mama G., Kenya, March, 30, 2014)

The beginning of monthly periods signaled a transition from girlhood to womanhood. Mothers reported being confused by this change, with some receiving no support from their own

mothers. Menstruation myths revolved around witchcraft and superstition. Depending on the setting mothers lived in (i.e., rural versus urban areas), hygiene during menstruation was managed using old clothes, cotton wool, tissue paper, pads, or tampons. If sanitary towels were not properly disposed of, they could be used in ritual practices to cast spells or curses on others. From discussion with the mothers, it appears menstruation myths exist to ensure proper hygiene. One mother said

the myth is if you leave your sanitary pad then someone can use it to make voodoo . . . if you put it anywhere everybody is going to look at that and if you put blood somewhere and it attracts flies that like preventing germs (Mom Barbara, Nigeria, April 12, 2014)

Similarly, another mother said

like the towels, you have to really take care of them; you can't just leave them anywhere because people can use them to do like voodoo and all those things. (Mom Shola, Nigeria, May, 21, 2014)

Sexual intercourse myths involved the negative consequences of engaging in premarital or extramarital sexual affairs. According to one mother, these consequences included death and supernatural happenings:

I was told, you are not allowed to sleep with a boy; you can't have sex with a boy before you get married. And if you decided to do that or you ended up doing that, you are going to start to get sick, like you are going to get skinny and your fingers they are going to be so long . . . I mean your fingers, not your nails, would get skinny. You'll start looking like so bad . . . like you were going to look like someone old . . . then you get too long and you end up dying (Mom Kasande, Zambia, April, 03, 2014)

Further conversation with Kasande from Zambia revealed that this was probably a description of late-stage HIV/AIDS, marked by weight loss and cachexia (muscle wasting), giving the appearance of looking "like someone old . . . and you end up dying" (April, 03, 2014).

Myths involving supernatural happenings, in which human beings are believed to adopt animal behaviors or even morph into animal forms, use fear to deter people from socially unacceptable behavior. One mother expressed this concept as follows:

I've heard about people saying that if somebody go and sleep with somebody's wife they are going to crow. They will start *cro-co-co-co* . . . Uh, (like a) hen. Like three times they will do *cro-co-do*, three times and then you pass away. They pass away, they die. I've heard about that. (Mom Kehinde, Nigeria, June, 01, 2014)

Pregnancy myths involved misinformation about how pregnancy occurs, how to prevent pregnancy, and how to terminate an unwanted pregnancy. Only one mother reported being aware of modern means of contraceptives while she was growing up. She explained that

when we were doing biology, there was a book known as introduction to biology, and I remember we were in form two; in the book they had written about safe days, and if you think that these are your safe days, and if you have sex you won't get pregnant. Some girls took it literally, and they went ahead and had sex with their boyfriends. When you meet them the next time, they are pregnant, and they used to say they used the biology book not knowing that it's a myth. Safe days are not really like that; there is so much involved with safe days. (Mom Tulip, Kenya, April, 05, 2014)

In the myth described above, girls between the ages of 14 and 16 years failed to understand how to calculate when in their menstrual cycle they were not fertile. Failure to calculate correctly, considering factors like the length of cycle and length of sperm survival in the body, resulted in unwanted pregnancies. As expressed by another mother, there was also misinformation on how to prevent pregnancy:

This [misinformation] were created by men who tried to cheat the girls; they did tell them if you take some kind of medicine it would prevent pregnancy, and some girls would take it, not knowing they were not contraceptive pill. People really took advantage of girls who didn't go to school and didn't understand what a contraceptive pill is, what it looked like. These girls could be easily manipulated. (Mom Tulip, Kenya, April, 05, 2014)

Uneducated girls became pregnant after having sex with men who gave them pills that they said were contraceptives, but were not. However, considering variable levels of education on pregnancy prevention, it is unclear if the men also believed that the pills they were giving the girls would be effective in preventing pregnancy. There was also the belief that pregnancy could be prevented by drinking undiluted hard liquor. One mother told us

like if you do have sex, you want to take like the alcohol, like it won't allow you to stay . . . that you don't want pregnancy to stay in your body Like do some Bacardi, something like that Yeah, the strong ones. (Mom Shola, Nigeria, May, 21, 2014)

Several myths on pregnancy termination were reported. Pregnancy termination myths were prolific due to lack of accurate RHE and lack of access to modern methods of birth control. In most myths, pregnancy could be terminated by drinking substances believed by the person to be corrosive or with a high acidic content. For example, one mother explained

I just knew what they said: that's if you get pregnant, you drank—you grind a bottle; you grind it very very smooth. You grind it very smooth and you drink it and it will cause the baby to come out. That's—I know that was very ridiculous but . . . because girls are not supposed to . . . have babies before marriage. So in case you are doing some sneaky stuff, and you accidentally . . . you get pregnant, you grind a bottle . . . you mix it with water and you drink it and supposedly it'll abort the baby. (Mom Auntie, Ghana, June, 13, 2014)

Myths involving similar abortifacients were reported from different countries, such as in the myth below from Nigeria and Guinea in which use of lemon to terminate pregnancy. A mother from Nigeria told us

and also, lemon and lime, because they're very strong if you drink it; if you think you're pregnant, you'll flush it down And also there's something . . . I know the name in my dialect in Nigeria, they call it "cone" . . . it's used to cook . . . it's a green leaf. . . . But you use that thing, you just put it to, like a little drop (Mom Shola, Nigeria, May, 21, 2014)

A similar process was described by another mother from Guinea:

I also heard in Guinea people drinking coke, Coca-Cola and putting a lot of lemon, lots, lots to, to flush the pregnancy, drinking a lot of carbonated drinks. (Mom Nan, Guinea, June, 18, 2014)

Substances used to cause abortions were cheap and easily available. They were mostly used for cooking or cleaning. Limestone is typically used in cooking in countries like Ghana, Nigeria, and Cameroon. It can be used in soups, to maintain the color of greens in stews, or to give some foods a smoother texture. One mother explained

girls who get pregnant and wanted to abort, they used this item we put in Ochre (a grey stone used for cooking) . . . it will make it to draw. Like to be, to be drawing (makes pulling motion), something like that I'm not sure of the English name . . . I think they put it in their drinking water, I don't know; it even spoiled their womb. It's not a good thing. (Mom Funky, Nigeria, April, 04, 2014)

Another mother told us a similar story:

Limestone, they use it to cook, it's very, you know, the cooking content of whatever, I don't know the chemical composition of it but it can be very, you know, how do I say, it can be very, it can burn you in the tongue if you touch it or have contact with your tongue . . . when you put your tongue on it to mix it in whatever drink and to drink it they say, some of them a lot of people have died from that, like trying to get rid of the pregnancy, drinking stuff like that . . . then there is blue, there is a color they call blue . . . yeah, you know when you wash white clothes and you put blue to make it look whiter, that kind of blue, they mix it up and drink and it can make pregnancy, you know, it can destroy the pregnancy and cause an abortion. (Mom Janet, Nigeria, July, 16, 2014)

Blue refers to laundry blue, a household product used to make fabrics, especially white fabrics, whiter. Participants also reported some benign myths related to sexual intercourse and pregnancy. These myths were believed to act as some form of birth control or to ensure the good health of pregnant women. For example, one mother told us

I also heard that—there are certain time of the season that you can meet partners or stuff like that that will not be against the culture. That has to do more with the culture of the people . . . I think it has to do more with, I'd say maybe the culture and the religion combined that there are certain times of the season that a man and a woman, you don't . . . you don't have sex, even though you are husband and wife. You have to be separate. (Mom Kehinde, Nigeria, June, 12, 2014)

The following myth described by Janet is believed to caution pregnant women about excessive sun exposure, which can cause dehydration or heat stroke and may negatively affect a pregnancy:

Yeah, like two (p.m.), between two (p.m.) and four (p.m.) you are not allowed to walk in the streets while the sun is so high, between two and four they believe the evil spirits are gonna get into the pregnant woman and then you are gonna give birth to something, you know, maybe a monster or a bad child (Mom Janet, Nigeria, July, 16, 2014)

Changes due to move to the United States

This subtheme was defined as *cultural changes due to move to the United States*. Mothers were queried about changes they experienced on moving to the United States. This question was intended to ask about some of the social constructs of acculturation as determined by participants. Overall, mothers we interviewed appeared to have difficulty answering this question. Intrinsically, they felt that their attitudes and beliefs had not changed due to their move to the United States. Most mothers reported career changes as the most significant change. Other significant changes included time, family support, clothes, and freedom of speech. Mothers felt that life in the United States was hurried, and they had little time to build relationships. When asked about how life changed moving to the United States, one mother explained

Everything, I don't know what particular thing that has not changed. You don't, you can't compare the African life with the American life. Everything here is like (snaps fingers) . . . is faster you know. (Mom Keke, Nigeria, June, 06, 2014)

Another mother responded

anything else have changed? . . . The only thing I can say is that it's a very fast world, a fast-moving world here, and you like to have more with your kids, which is kind of different from back home. (Mom Mary, Kenya, March, 22, 2014)

A third mother said

we've lived here for 12 years now. Yeah, we've lived in this area—this house . . . for 12 years now. And sometimes even your neighbor; you don't know what's going on there. Our neighbor passed away, we didn't even know (Mom Auntie, Ghana, June, 13, 2014)

Family support, although sometimes replaced by community support, is not as generous as that received in their countries of origin. One mother explained as follows:

you know, back home, like people do stuff for people free . . . like, if you have a baby now, if you bring it to me, I don't expect you to give me anything; it's out of the goodness of my heart. Your child can stay in my house for as long as you want her to stay, but that can't happen here (United States), you know . . . back home your brother can stay with you, you don't expect him to give you anything back in return and there is that African hospitality that you don't ask when are you going, when are you going. You

don't expect anything back from him. While here . . . that does not happen. (Mom Keke, Nigeria, June, 06, 2014)

Most mothers reported that they dressed almost the same as in their countries of origin, with traditional attire being worn on special occasions. However, one participant did report that she was forbidden by her church from wearing traditional attire so as to appeal to all possible congregants:

back home I can wear my traditional outfit most times to the church, but now as a minister in the church we are not allowed to wear The traditional wear my traditional outfit like gele and wrapper (head dress and outfit). I am a minister in the church, and they are, when you do that, we are supposed to bring everybody in so like they allow other people to wear it, but as a minister, you are supposed to be formally dressed you wear a skirt suit It has to be formal. They only allow us to wear that like once in a year. But on a normal Sunday, they want you to be formal . . . but back at my home, we wear it every Sunday to church. Now I can't do that. (Mom Yety, Nigeria, June, 04, 2014)

Mothers we interviewed did report experiencing greater freedom of speech living in here in the United States. As one mother explained, this freedom allowed their daughters to have more life choices:

freedom have changed, like freedom of speech, like back home we are still drawn with culture But here the culture is kind of blend into American culture. Now, I usually tell them it's very good because you make a choice of what you wanna choose. (Mom Mary, Kenya, March, 22, 2014)

Reported U.S. norms

This subtheme captures the mothers' report of perceived U.S. cultural and social norms, mostly in relation to sexual health issues. Mothers we interviewed felt that U.S. society was more permissive and accepting of overt sexual behavior. For example, one mother said

sex is not a big deal to Americans. It's like sex is a way of life or food so for someone who is not your boyfriend, you can go have sex with them, but something like that is not acceptable in Africa, even when someone is your boyfriend, when you do it you feel bad

because you are not married, and that's what leads to separation between boyfriend and girlfriend because if you are going to be putting pressure, they tell you, go your way, I go mine, but here it's the number one thing on the table. (Mom Barbara, Nigeria, April, 12, 2014)

About U.S. society, another mother commented

everything is in the open, there is nothing to hide, even if you don't tell them they hear it from their friends, they watch it from the TV, on the Internet so there is nothing to hide. (Mom Keke, Nigeria, June, 06, 2014)

Four mothers expressed that sexual involvement here in the United States starts at very young ages, which was very different from their experience growing up in their African country of origin:

so that concept of having a boyfriend—by ten, eleven, it's already there. In this country, they start really young. We were too young for that. We couldn't even In my time, that was unheard of; (Mom Mama G, Kenya, March, 30, 2014)

she has a friend, and her friend is, she is also the same age as her (13 years), and she came to me, tell me, "hey mom, my friend has a boyfriend;" (Mom Lola, South Sudan, May, 02, 2014)

like I told you, like to us our culture that's not something (sex) that you are supposed to do until you get married. But here when I first came to this country, it's just amazing, like some of the girls, I have a neighbor over there, like to her it was so exciting for her daughter to have a boyfriend even at the age of 8 years old. I found it so weird to me, but to them here . . . I mean, like you know, like to them it's just nothing; (Mom Kitty, Nigeria, June, 04, 2014)

it's just like here, when my daughter tells me like a fifth grader, a sixth grader is having boyfriend, like, I'm always like, oh what do they know about those things . . . Fifth grade is like eleven. Like who do they know—like what is all this? Some of them in fourth/fifth grade and things like that. Like I mean it's a totally different thing from the way I was raised. (Mom Yety, Nigeria, June, 04, 2014)

8.6 DISCUSSION

Using a qualitative descriptive approach, we examined the myths and taboos about sexual issues that African immigrant mothers, who are currently living in the United States, were exposed to growing up in their countries of origin. Four categories of myths related to reproductive health issues were identified. Few taboos were reported. Myths concerned menstruation, sexual intercourse, pregnancy and HIV/AIDS.

The mothers we interviewed mostly came from cultures that did not condone premarital sex—or even boy-girl relationships—once adolescence was reached. Excessive caution was taken to ensure boy-girl interactions did not occur. Some of the ways this was done included single sex high schools and warning girls that they could get pregnant by coming into any physical contact with a boy.

Mothers tended to retain their cultural attitude towards RHE, but they did not maintain cultural actions. Cultural actions included not talking about reproductive health issues and threats to disown girls who became pregnant before marriage. Culture dictated attitudes such as (1) there should be abstinence before marriage and (2) there should be no boy-girl relationships during adolescence. In conversations with the mothers, we learned that most of them believed that their daughters 10–14 years old had no interest in boys. They believed that their daughters were very focused on their education. Because this study did not interview the daughters, it is unclear if this is indeed the case.

Despite being exposed to several myths and taboos while growing up in Africa, the mothers we interviewed did not appear to believe in them. This group of mothers provided RHE to their daughters without passing on any myths or taboos. The exception was one mother who, although she could not remember any, was saddened that she was not able to pass that

information to her daughter. Mom Lola reported that she wanted to pass on myths and taboos to her daughter because it was part of her culture—a culture that she was separated from at a young age, and one she was forgetting, despite her desire to remember. Mom Lola was the only mother in the study who reported coming to the United States as a refugee. Immigrating due to a war potentially contributed to her desire to maintain all aspects of her culture, whether positive or negative.

All mothers we interviewed acknowledged that it was necessary to provide their daughters with RHE because life in this country was different than it is in Africa. Daughters are exposed to more sexual content in the United States than they would have been growing up in the mothers' countries of origin. The mothers also stated that there are more media sources here in the United States through which to access potential sexual material. They realize that conversations about RHE must occur at earlier ages in the United States than they would in their countries of origins; moreover, they recognize that these conversations may require more RHE content than they are comfortable about providing.

8.7 CONCLUSION

By examining the myths and taboos that African immigrant mothers living in the United States were exposed to growing up in their countries of origin, we are able to somewhat contextualize their immigrant experience regarding RHE. Although the mothers we interviewed narrated myths that they were privy to, the majority of mothers did not appear to believe them. Engaging in sexual intercourse was the major taboo reported. This in turn led to mothers' overemphasis on abstinence for their daughters.

These findings further advance our understanding of the cultural context of African immigrant mothers living in the United States. Although we cannot generalize our results, we have begun to understand the contexts in which the mothers grew up and how these contexts contribute to subsequent reproductive health discussions with their daughters. The mothers who participated in our study acknowledge cultural differences that require them to have conversations for which they have little preparation and that their cultural background forbids discussing. Despite this, living in the United States appears to contribute to earlier, more detailed RHE conversations among the mothers we interviewed.

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APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

African Immigrant Mothers Teaching Daughters about RHE: Demographic Questionnaire

1. In what **YEAR** were you born?

2. What is your **COUNTRY** of birth?

3. Did you move directly from your country of birth to the U.S?

_____ Yes

_____ No

If **NO**, please list all other countries you lived in before coming to the U.S., and the amount of time you lived in that country.

Country

Amount of time lived in that country

4. Which country was your daughter(s) born in? (Daughter who is 10-14 years old)

5. At what age did you daughter (Daughter who is 10-14 years old) start to develop breasts?

6. At what age did the daughter (mentioned above) start monthly period/menses?

7. Which of the following most accurately describes the type of place you lived in, while in Africa?

- ☐ Urban area
- ☐ Rural area
- ☐ Big city
- ☐ Big town
- ☐ Small town
- ☐ Nomadic community
- ☐ Other (please specify) _____

8. On what type of visa did you first travel to the Unites States?

- ☐ Student
- ☐ Visitor
- ☐ Refugee
- ☐ Business
- ☐ Green card
- ☐ Other (Please specify) _____
- ☐ I choose not to answer this question

9. What was your reason for immigrating to the United States?

- ☐ Educational
- ☐ Financial
- ☐ Political persecution
- ☐ Religious persecution
- ☐ Live with family members
- ☐ Other (please specify) _____
- ☐ I choose not to answer this question

10. Do you make regular visits to you home country?

- ☐ No
 - ☐ Yes,
- If yes, how regularly? _____

11. Thinking back to your adolescent years (ages 10-18), which African country do you identify with the most?

12. What was your occupation when you lived in your African country?

13. What is your current **OCCUPATION**?

14. What was the highest level of education you achieved while in Africa?

- ☐ Grade 8 (Primary School) or Less
- ☐ Grade 9-12 (High School), did not graduate
- ☐ High School graduate
- ☐ Some college/university or trade school
- ☐ College graduate
- ☐ Some graduate school
- ☐ Graduate School completed

15. What is the highest **GRADE** that you have currently completed?

- ☐ Grade 8 (Primary School) or Less
- ☐ Grade 9-12 (High School), did not graduate
- ☐ High School graduate
- ☐ Some college/university or trade school
- ☐ College graduate
- ☐ Some graduate school
- ☐ Graduate School completed

16. How does your level of education compare with that of your mother?

- ☐ Higher
- ☐ Lower
- ☐ The same
- ☐ I do not know

17. What is your current marital status?

- ☐ Single
- ☐ Married
- ☐ Cohabiting relationship
- ☐ Separated
- ☐ Divorced
- ☐ Widowed
- ☐ Other, please specify _____

18. What is the country of **BIRTH** of your husband or significant other?

19. What is your religion?

- ☐ Protestant
- ☐ Muslim
- ☐ Roman Catholic
- ☐ African Tribal Religion
- ☐ None
- ☐ Other, please specify _____
- ☐ I choose not to answer this question

20. About how often do you attend religious services?

- ☐ Never
- ☐ Special occasions only (i.e. Christmas, weddings)
- ☐ Once a month
- ☐ Once a week
- ☐ More than once a week
- ☐ Other, please specify _____
- ☐ I choose not to answer this question

21. What church/ religious building do you go to?

22. What is your total family income?

- ☐ \$14,999 or less
- ☐ \$15,000-\$29,999
- ☐ \$30,000-\$59,999
- ☐ \$60,000-\$99,999
- ☐ More than \$100,000
- ☐ I choose not to answer this question

23. How did you hear about this study?

- ☐ Flier in a grocery store
- ☐ Flier in a hair salon
- ☐ From a friend
- ☐ From Facebook
- ☐ From an email sent by the Union of African Communities in Southwestern Pennsylvania
- ☐ Other, please identify _____

24. In your opinion, what is the BEST way to recruit African mothers for a study like this?

APPENDIX B

VERBAL CONSENT FORM



University of Pittsburgh

School of Nursing

VERBAL CONSENT TO ACT AS A PARTICIPANT IN A RESEARCH STUDY

TITLE: The Experience of Immigrant African mothers engaging in reproductive health education with daughters' ages 10-14 years.

PRINCIPAL INVESTIGATOR: Kafuli Agbemenu PhDc, MPH, MSN, RN

440 Victoria Building, 3500 Victoria Street, Pittsburgh, PA, USA 15261

412-916-4127 (office), 412-624-2401 (fax), Kaa45@pitt.edu

FACULTY ADVISOR:

Dr. Willa M. Doswell, PhD, RN, FAAN, Associate Professor,
3500 Victoria Street, Room. 440, Pgh, PA 15261, 412-624-8977
Fax: 412-624-8521, Email address wdo100@pitt.edu

SOURCES OF SUPPORT:

- Beryl B. Haughton Jackson Endowed Fund for Graduate Students to Study Women's Health
- Center for Health Equity (CHE) Masters & Doctoral Student Scholarship Award
- Sigma Theta Tau Research Award

My name is Kafuli Agbemenu, and I am a PhD student at the University of Pittsburgh School of Nursing. The purpose of this research study is to look at how African immigrant mothers of daughters ages 10-14 years talk to their daughters about reproductive health issues. Specifically, we want to examine the experience of the mothers when providing this education, and the timing, content and social-cultural issues that affect this process.

If you agree to participate in this study, you will be asked to complete a demographic questionnaire that has about 23 questions. This will take 20-30 minutes. I will conduct an interview with you. The interview will take about 1 ½ hours in a quiet place-either in your house or another place we agree on.

About two weeks after completing the interview, I will call you to find out if you want to add anything to the interview, and/or to clarify any questions.

There may be some emotional risks to discussing issues regarding sexual activity, and you may feel uncomfortable. An additional risk associated with this, and any other research study, is the possibility of a breach in confidentiality, but we will do everything possible to protect your privacy. There is no direct benefit from taking part in this study.

There are no costs to you for participating in this study. If you complete this study, you will receive a \$30 prepaid debit card for completing this study.

All records are strictly confidential (private), and any records that include your identity will be stored in locked files and kept for a minimum of seven years. Your identity will not be revealed in any description or publications of this research. We will not report individual information for anyone involved in this study. Pseudonyms (fake names) will be used if any direct quotes are used in the reporting of this study.

It is possible that authorized representatives from the University of Pittsburgh Research Conduct and Compliance Office may review your data for the purpose of monitoring the conduct of this study. In very unusual cases, your research records may be released in response to an order from a court of law. Also, if investigators learn that you or someone with whom you are involved is in serious danger of potential harm, they will need to inform the appropriate agencies as required by Pennsylvania law.

Your participation in this study is voluntary. You can refuse to take part in it at any time, even after agreeing to be in the study. Your decision to participate will not affect your relationship with the University of Pittsburgh or with other organizations. You are also under no obligation to participate in any other studies I coordinate.

If you have further questions about this research study, please contact me.

Do you agree to participate in this study?

{If No}: Ok, thank you.

{If Yes}: Ok, thank you.

APPENDIX C

INITIAL INTERVIEW GUIDE

African immigrant Mothers Teaching Daughters about RHE: Initial Interview Guide

Interview Guide to be used to talk with African immigrant mothers about their reproductive health communication with their daughters who are between the ages of 10-14 years.

_____, thank you for taking time to participate in this study. As I mentioned previously, this study is about your experiences providing RHE to your daughter (s) who is/ are between the ages of 10-14 years old. You are the expert about this experience and that is exactly what we want. There are no right or wrong answers, because your experience is what we are interested in. Reproductive health education means talking about things related to having children- things like reproductive body parts, monthly periods, boy-girl relationships, how pregnancy happens and how to prevent pregnancy. I will be taping our talk to make sure I don't miss anything. Is it ok with you that I record our talk? To make sure your privacy is ensured, your name will not be used when we write out what is said on the tape. You will be identified by a study ID number only. This interview will not be discussed with anyone else except my supervisors. I will be taking notes as we talk to help me keep focused as we talk. You are free to end this interview at any time you want.

Do you have any other questions? Ok, let's get started. I am going to record with two different recorders in case one of them has problems. Is it ok if I start recording now?

1. Icebreaker Questions:

- How long have you lived in Pittsburgh (or Buffalo)?
- Have you lived anywhere else in the US?
- Who else lives in your house?
- What languages do you speak at home?

- Do you speak these languages to your children?

-Which of these languages do you speak to your children?

- Tell me more about that.

For this study, RHE means talking about things related to having children- things like reproductive body parts, monthly periods, boy-girl relationships, how pregnancy happens and how to prevent pregnancy. Thinking of this meaning,

2. Did you receive reproductive health education from *your* mother?

-If **yes**, tell me what she told you.

-Tell me what topics did you talk about?

-If **no**, where did you learn about reproductive health issues?

3. In general, tell me about how boy girl sexual issues were talked about in (country of origin) _____

4. Did you hear of any myths or taboos about sexual matters as you were growing up?

5. (If yes), tell me more about that.

6. Did girls you knew growing up get pregnant?

-If yes, what happened?

-How did you find out?

-How was it dealt with?

- Did you tell your mother about it?

7. Did girls you knew growing up get a sexual disease?

-If yes, what happened?

-How did you find out?

-How was it dealt with?

- Did you tell your mother about it?

8. What do you think about mothers providing this kind of education to their daughters?

9. Why might a mother give her daughter reproductive health education?

10. How old is your daughter?

11. Have you talked to her about reproductive health issues?

-If YES, how old was your daughter when you started talking to her about sexual health issues?

-How did you feel when discussing sexual issues with your daughter?

-Tell me the about the setting where these discussions took place.

- By that I mean, where were you when you had these talks? At home? In a social setting?

- Tell me more about what you talked about. Who asked first, about sexual health issues?

- What led to the discussion? So how did the conversation start?

- So, do you feel you gave her enough information?

- Do you think the information was accurate?

-If No, why?- At what age do you think you should start these talks?

- * Do you think these talks should be started?

- Why that age? Do you think this was too late, or too early?

-What would you talk about?

- Who should start the discussion?

12. Is there anyone else in your household who has provided reproductive health information to your daughter?

-Tell me more about that. How did you find out? Do you know what was discussed?

13. Has she started to develop breasts?

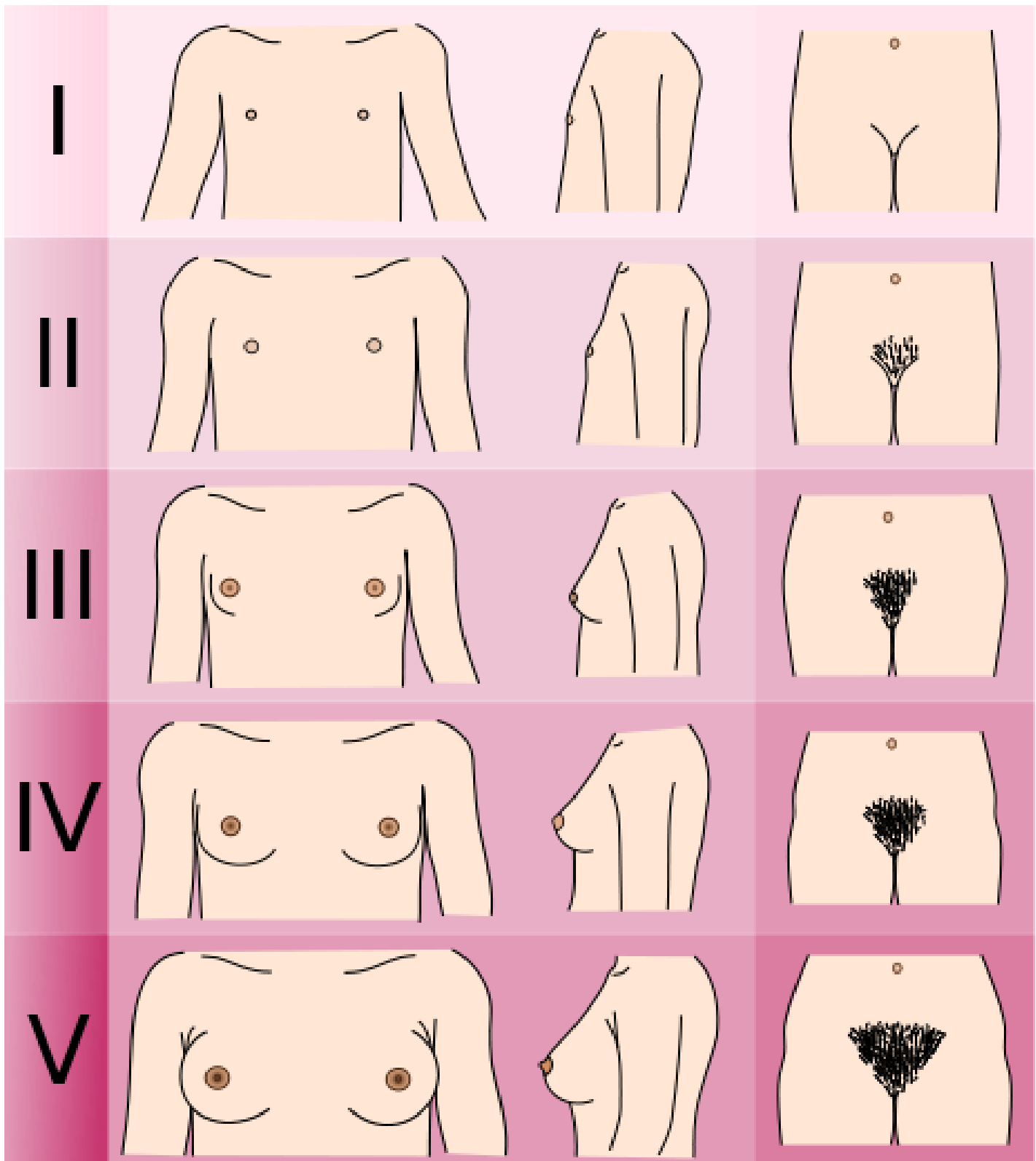
- **If YES**. Ok, can you look at this picture and tell me what stage she is in? (Show Tanner pictures).

14. Has she started her menses/monthly periods?
- **If YES**, how old was she when they started?
15. Do you think being in this country has changed how you talk to your daughter about sexual issues? How so?
- (Did you talk to your older daughter about these things? How old was she?)
16. Besides moving to this country, are there any other things that have changed?
15. What things about you do you feel have changed about you since coming to the U.S.? Like the type of clothes you wear, the language you speak, the type of friends you have- things like that...
16. Ok, two last questions: Is there anything else about talking to your daughter about sexual issues that I have not asked that you think I should ask to better understand this issue?
17. When I write up this study what name do you want me to use when I quote you? _____
Don't use your real name.

Thank you so much for taking the time to talk to me. I really appreciate your time and information. I will be typing out our interview and in the next few weeks I will contact you so we can review the information from today's interview. At that time you will be able to add any additional information or I may ask you to clarify any questions I may be confused about.

Thank you again.

Tanner Stages



APPENDIX D

CLARIFICATION INTERVIEW GUIDE

African immigrant Mothers Teaching Daughters about RHE: Clarification Interview Guide

Follow up interview Guide to be used to talk with African immigrant mothers about their reproductive health communication with their daughters who are between the ages of 10-14 years.

Hello, this is Kafuli Agbemenu, the researcher from the University of Pittsburgh School of Nursing. I am calling to talk a little more about the interview we did a few weeks ago. Do you have 10-15 minutes to talk right now?

{If No}: Ok, when would be a better time to call you? Ok, thank you. I will call back then.

{If Yes}: Ok, thank you.

(Ask clarification questions generated from the initial interview).

Thanks once again for taking the time to talk to me. I really appreciate your time and information. To compensate you for completing this study, I have a \$30 prepaid debit card for you. It will be activated by tomorrow morning at 6am. You can use it like a regular bank card. Thank you.

APPENDIX E

TELEPHONE SCREENING SCRIPT

Telephone Screening Script

Thank you for calling to find out more about our research study. My name is Kafuli Agbemenu, and I am a PhD student at the University of Pittsburgh School of Nursing. The purpose of this research study is to look at how African immigrant mothers talk to their daughters about reproductive health issues. Specifically, we want to examine the experience of the mothers when providing this education, and the timing, content and social-cultural issues that affect this process.

As part of our study, we will be asking mothers to complete a demographic questionnaire and interviews about talking to their daughters about reproductive health issues.

Do you think you might be interested in participating in that study?

{If No}: Ok, thank you very much for calling.

{If Yes}

: Ok, thank you. But before enrolling people in this study, we need to determine if they are eligible. And so what I would now like to do is to ask you five questions about you and your daughter. There is a possibility that some of these questions may make you uncomfortable or distressed; if so, please let me know. You don't have to answer those questions if you don't want to. You also need to understand that all information that I receive from you by phone, including your name and any other identifying information {if applicable}, will be strictly confidential and will be kept under lock and key. The purpose of these questions is only to determine whether you are eligible for the study. Remember, your participation is voluntary; you do not have to complete these questions.

Do I have your permission to ask you these questions?

Ok, thank you.

Questions:

1. Have you talk to your daughter about reproductive health issues? This includes talking about things related to having children- things like reproductive body parts, monthly periods, boy-girl relationships, how pregnancy happens and how to prevent pregnancy.
2. Which country were you born in?
3. How many years of your life did you live there?
4. Are you able to read and write English?
5. Do you have at least one daughter ages 10-14 years?

APPENDIX F

IN PERSON SCREENING SCRIPT

In person Screening Script

Thank you for your interest in my research study. The purpose of this research study is to look at how African immigrant mothers talk to their daughters about reproductive health issues.

Specifically, we want to examine the experience of the mothers when providing this education, and the timing, content and social-cultural issues that affect this process.

As part of our study, we will be asking mothers to complete a demographic questionnaire and interviews about talking to their daughters about reproductive health issues.

Do you think you might be interested in participating in that study?

{If No}: Ok, thank you.

{If Yes}

: Ok, thank you. But before enrolling in this study, we need to determine if you are eligible. So I need to ask you five questions about you and your daughter. There is a possibility that some of these questions may make you uncomfortable or distressed; if so, please let me know. You don't have to answer those questions if you don't want to. You also need to understand that all information that I receive from you, including your name and any other identifying information {if applicable}, will be strictly confidential and will be kept under lock and key. The purpose of these questions is only to determine whether you are eligible for the study. Remember, your participation is voluntary; you do not have to complete these questions.

Do I have your permission to ask you these questions?

{If Yes}: Ok, thank you.

Questions:

1. Have you talk to your daughter about reproductive health issues? This includes talking about things related to having children- things like reproductive body parts, monthly periods, boy-girl relationships, how pregnancy happens and how to prevent pregnancy.
2. Which country were you born in?
3. How many years of your life did you live there?
4. Are you able to read and write English?
5. Do you have atleast one daughter ages 10-14 years?

If all questions are answered appropriately,

Ok. Thanks. It looks like you qualify to be in this study. Can I please have your contact information, and would you like to schedule a date to complete study paper work and do the interview?

If all questions not answered appropriately,

Unfortunately it looks like you do not qualify to be in this study. Thanks so much for your interest. If you have a friend who is an African mother and has a daughter 10-14 years, I would appreciate if you can let her know about this study (give another study flyer).

APPENDIX G

COMMUNITY RECRUITMENT LETTER



March 1, 2014

Dear Community Leader,

Greetings! My name is Kafuli Agbemenu. I am an African immigrant student pursuing my PhD at the University of Pittsburgh, School of Nursing. I am seeking your support to conduct my dissertation study. The goal of my research study is to understand how African immigrant mothers of daughters ages 10-14 years old provide reproductive health education to their daughters. For the study, only mothers will complete a survey and participate in two interviews. The study will potentially start in March 2014.

Very little research in the U.S. has been done with African immigrants, and the study I am proposing is the very first study of its kind.

As a community leader who has regular interaction with African immigrant mothers, I would greatly appreciate it if, you would circulate my attached research study flyer to the African mothers you interact with, via your email list servs, social media websites and announcement boards.

I have also attached a more detailed summary of my study for your review. Please do not hesitate to contact me if you have any questions. I can also come out and talk to your groups to explain more about the study.

Thank you very much for your help.

Sincerely,



Kafuli Agbemenu PhDc, MPH, MSN, RN
PhD Candidate
University of Pittsburgh
School of Nursing
(412) 916-4127
Kaa45@pitt.edu

**The Experience of Immigrant African Mothers Engaging in Reproductive health
Education with Daughters Ages 10-14 years.**

Study Summary

Mother talking to daughters about reproductive health issues has been associated with decreased adolescent sexual risk-taking behaviors, decreased incidences of sexually transmitted infections (STIs), and declines in teen pregnancy. Studies from African countries indicate that daughters prefer to receive reproductive health education (RHE) at an earlier age, though a review of RHE studies in African countries reveals that mothers tend to be reluctant to provide RHE due to religious and cultural beliefs, mother's education level, and lack of adequate communication techniques. It is unclear at what age African daughters begin to receive this education from their mothers or what other factors might influence more appropriate communication between mother and daughter about this topic. That is the focus of this study, especially as African families immigrate to the United States where RHE is more open.

The African immigrant population in the United States is a fast growing and underrepresented community, both in terms of immigrant health research and public health services. Since 1990, African immigration into the US has increased by 40%, with more than 75% of African immigrants arriving after this date. African immigrants tend to retain their culture once in the United States, finding ways to maintain their traditions and belief systems. As such, it is unclear how Africans negotiate their new cultural context or how they are influenced, by American culture especially when it comes to RHE. To date, no studies have examined the experiences of African mothers living in the United States related to providing RHE to their adolescent daughters.

The specific aims of this study are to:

1. Describe the experience of African mothers living in the United States in providing RHE to daughters ages 10-14 years.
2. Describe timing, content of education and socio-cultural context that influence mother-daughter RHE.

3. Explore women's perceptions of how moving to the United States has changed their ideas about speaking to their daughters about reproductive health.

We will recruit approximately 20 African immigrant mothers. Each mother will complete a demographic survey and participate in two interviews, one in-depth and one follow-up. The survey will include items like: country of origin, age, education level, income level, religion and religiosity, marital status, occupation and years lived in the US. The first interview will be in-person and ask questions on the, experience, timing, content and socio-cultural context of mother-daughter RHE. A follow-up interview will allow the researcher to ask any other questions needed. Mothers will receive a \$30 prepaid debit card after the follow up interview.

Conclusion: This research will assist in describing the experience of these mothers engaging in RHE with their adolescent daughters' ages 10-14 years old. Identifying individual and socio-cultural influences of the process may assist in future intervention strategies aimed at African immigrant mothers to reduce sexual risk taking behaviors among their adolescent daughters.

APPENDIX H

GROUP PRESENTATION SCRIPT

The Experience of Immigrant African Mothers Engaging in Reproductive health Education with Daughters Ages 10-14 years.

Group Presentation Script

Thank you so much for inviting me here today. I am really grateful. My name is Kafuli Agbemenu. I am a PhD student at the University of Pittsburgh School of Nursing. I am conducting a research study on how African mothers living here in the U.S. provide reproductive health education to their daughters. I want to tell you a little about what I am doing in the research study. Feel free to ask me any questions as I explain about the study.

I was interested in this topic because growing up in Kenya, our mothers did not talk to us about reproductive health issues- issues like teenage pregnancy, boy-girl relationships, your changing bodies and things like that. Now that I am older and live here in the U.S., I want to find out how things are now.

The African immigrant population in the United States is a fast growing and underrepresented community, both in terms of immigrant health research and public health services. Since 1990, African immigration into the US has increased by 40%, with more than 75% of African immigrants arriving after this date.

But until now, no studies have looked at the experiences of African mothers living in the United States related to providing reproductive health education to their adolescent daughters.

So what I want to do in this research study is to:

4. Describe the experience of African mothers living in the United States in providing reproductive health education to daughters ages 10-14 years.
5. Describe timing, content of education and socio-cultural context that influence mother-daughter reproductive health education.
6. Explore women's perceptions of how moving to the United States has changed their ideas about speaking to their daughters about reproductive health.

I am looking for atleast 20 African immigrant mothers who have daughters ages 10-14 years. I need the mothers to be able to read, write and speak English and willing to talk to me about providing reproductive health education to their daughter.

Each mom will complete a survey and two interviews, one very detailed and one follow-up. The survey will include items like: country of origin, age, education level, income level, religion, marital status, occupation and years lived in the US. The first interview will be in-person. A follow-up interview will ask any other questions needed. Mothers will receive a \$30 prepaid debit card after the follow up interview.

The point of this research will be help describe the experience of African mothers engaging in reproductive health education with their adolescent daughters' ages 10-14 years old. This is helpful to assist in future intervention strategies aimed at African immigrant mothers to reduce sexual risk taking behaviors among their adolescent daughters.

I have some flyers for my study. Let me know if you want some copies. Here is my card if you want to join the study. Please tell your friends and you can give them my flyer and contacts. Also if you have another group you want me to talk to, you can let me know.

Thank you!

APPENDIX I

REQUEST FOR COMMUNITY SUPPORT LETTER



July 20, 2013

Dear Community Leader,

Greetings! My name is Kafuli Agbemenu. I am an African immigrant student pursuing my PhD at the University of Pittsburgh, School of Nursing. I am seeking your support to conduct my dissertation study. The goal of my study is to understand how African immigrant mothers of daughters ages 10-14 years old provide reproductive health education to their daughters. For the study, mothers will complete a survey and participate in two interviews. The study will potentially start in November 2013.

Very little research in the U.S. has been done with African immigrants, and the study I am proposing is the very first study of its kind.

As a community leader who has regular interaction with African immigrant mothers, I would greatly appreciate it if, as a gesture of goodwill, you would write me a letter of support for this study. The letter would indicate that you support the idea of this study, and that you will assist in getting the word out about this study, in your communities.

I have attached a more detailed summary of my study for your review. Please do not hesitate to contact me if you have any questions. I can assist with drafting of support letters.

Thank you very much for your help. I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read "Kafuli Agbemenu".

Kafuli Agbemenu PhDc, MPH, MSN, RN
PhD Candidate
University of Pittsburgh
School of Nursing
(716)-408-7450
Kaa45@pitt.edu

UNION OF AFRICAN COMMUNITIES LETTER OF SUPPORT

Union of African Communities in Southwestern Pennsylvania

6435 Franksown Avenue,
Pittsburgh, PA 15206 Pittsburgh, PA 15206
P: 412-759-4565
E-mail: info@pittsburghafricans.org
Website: www.pittsburghafricans.org



July 12th, 2013

Kafuli Agbemenu, MPH, MSN, RN
PhD Student
University of Pittsburgh School of Nursing

Dear Kafuli Agbemenu,

The Union of African Communities in Southwestern Pennsylvania (UAC) is an umbrella organization comprised of over 7,000 members from over 25 African countries and communities. As such, we are pleased to offer this letter of continued support of your proposed project to examine the process through which African immigrant mothers engage in reproductive health education with daughters ages 10-14 years. As you have outlined in your proposal, mothers are at times unwitting or unable to provide comprehensive sex education to their daughters. This makes them more prone to teenage pregnancy and STIs, including HIV/AIDS.

As a community based organization and through our most recent community assessment, we have identified the above issues to be problems in the immigrant African community of the Pittsburgh region. We fully support your project and hope that your project will demonstrate an increased interest in mothers providing their daughters with this necessary education.

To assist with recruiting, the Union of African Communities in Southwestern Pennsylvania will:

1. Connect you directly with community members and help disseminate information through our community listserv, facebook page and all other avenues available to us, as needed.
2. Introducing you to leaders of African communities in this region.
3. Notify you of African events and businesses in which you could potential recruit.

We look forward to seeing the results of this important initiative.

Sincerely,

Benedict Killang
President

Union of African Nations in Southwestern Pennsylvania

Member communities/organizations: Ghana, D.R Congo, Sudan, Liberia, Zambia, Nigeria, Cameroon, Somalia, Zimbabwe, Sierra Leone, Gambia, Guinea, Kenya, Angola, Guinea Conakry, Togo, Benin, Tanzania, Rwanda, Libya, Egypt, Rwanda, Burkina Faso, Senegal, Africa Quest, African Diaspora Fellowship (ADF), Pittsburgh Area African Professionals Organization (PAAPO), African Women's Club, University of Pittsburgh African Faculty Organization, Diaspora University African Student Organization, The Africa College African Students, African Students of the University of Pittsburgh, Young African Leaders Alliance of Carnegie Mellon University (YAL-A), Pan-African Graduate and Professors Study Union (PAGPSU), African Churches African Home Community, African West Africa, Dennis Greenfield, Tropic Group.

APPENDIX J

STUDY FLYER



I am an African immigrant student from the University of Pittsburgh and I would like to talk to you about how you discuss reproductive health issues with your daughter ages 10-14 years.

- Are you an African mother living in the United States?
- Do you have a daughter between the ages of 10-14 years old?
- Have you talked to your daughter about reproductive health issues like teen pregnancy?

If you answered YES to all 3 questions, you may qualify to participate in this research study.



The research study will include a survey and 2 interviews
Participation may take up to 2 and a half hours.
You will be compensated with \$30 card after completing the study
ONLY mothers will be interviewed

If you are interested, please contact Kafuli Agbemenu PhDc, MPH, MSN, RN
at 412-916-4127 or kaa45@pitt.edu

IRB APPROVAL- MAN ON THE STREET APPROACH



**University of Pittsburgh
Institutional Review Board**

Christopher M. Ryan, Ph.D., CIP
Director, Institutional Review Board

Office: 3501 Forbes Avenue, Suite 718
Mail: 3811 O'Hara Street
Pittsburgh, PA 15213
Phone: 412.383.1480
Fax: 412.383.1508
e-mail: ryancm@upmc.edu

**Approval of WePay™ Exception Request:
“Man on the Street” Payment Option**

Date: 28 March 2014
IRB Number: PRO13050519
Investigator: Kafu Agbemenu, PhD, MPH
IRB Protocol Title: The experience of African mothers engaging in reproductive health education with daughters

Thank you for submitting a request to make payments using the “Man on the Street” option and for an exception to the requirement to collect social security numbers for subjects receiving payments for participating in the above referenced research study. I have carefully reviewed all of the materials provided to me about this project and on that basis, approve your requests. Both exceptions are applicable to this research study only.

Please note that we are granting exceptions as part of a feasibility study that examines the extent to which subjects participate in multiple research studies over the course of a calendar year and obtain \$600 or more in incentive payments. The \$600 limit is the IRS threshold that requires the paying organization to report this other income to both the taxpayer and the IRS on Form 1099-MISC. Should we subsequently discover that subjects in this ‘exception’ program have reached that IRS reporting threshold, we may modify or disband this program. If that happens, you will be notified in a timely manner.

You have also requested permission to use the “Man on the Street” payment option. Based on the small payment (\$30) and the subject population and nature of the study (these are open-ended interviews undertaken in community centers, libraries, or homes where it would not be easy to update WePay cards), I am also happy to approve that request for this research study only.

The PI or designate will obtain funds through a WePay™ card issued in their name for distribution to study subjects. A separate record must be maintained in sufficient detail to account for all payments (e.g., a subject receipt log initialed by the recipient of the payment) should be prepared and maintained by the PI as necessary for audit purposes.

The University of Pittsburgh’s Office of Finance can answer detailed questions about the WePay™ system.

If you have any other questions, please don’t hesitate to contact me directly.

Best wishes,

Christopher M. Ryan, Ph.D., CIP
Director, University of Pittsburgh Institutional Review Board



I am an African immigrant student from the University of Pittsburgh and I would like to talk to you about how you discuss reproductive health issues with your daughter ages 10-14 years.

- **Are you an African mother living in the United States?**
- **Do you have a daughter between the ages of 10-14 years old?**
- **Have you talked to your daughter about reproductive health issues like teen pregnancy?**

If you answered YES to all 3 questions, you may qualify to participate in this research study.



**The research study will include a survey and 2 interviews
Participation may take up to 2 and a half hours.
You will be compensated with \$30 card after completing the study
ONLY mothers will be interviewed**

**If you are interested, please contact Kafuli Agbemenu PhDc, MPH, MSN, RN
at 412-916-4127 or kaa45@pitt.edu**



July 20, 2013

Dear Community Leader,

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As a community leader who has regular interaction with African immigrant mothers, I would greatly appreciate it if, as a gesture of goodwill, you would write me a letter of support for this study. The letter would indicate that you support the idea of this study, and that you will assist in getting the word out about this study, in your communities.

I have attached a more detailed summary of my study for your review. Please do not hesitate to contact me if you have any questions. I can assist with drafting of support letters.

Thank you very much for your help. I look forward to hearing from you.

Sincerely,

A handwritten signature in black ink, appearing to read "Kafuli Agbemenu".

Kafuli Agbemenu PhDc, MPH, MSN, RN
PhD Candidate
University of Pittsburgh
School of Nursing
(716)-408-7450
Kaa45@pitt.edu

APPENDIX K

PILOT STUDY POSTER

An Examination of the Attitudes and Beliefs of Immigrant African mothers towards providing comprehensive sex education to their daughters ages 12-17 years



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Background

- There are disproportionately high rates of teen pregnancies and STIs in African-American populations. African immigrants are included in these statistics
- Comprehensive sex education (CSE) is effective in delaying sexual debut, reducing frequency of sex and number of sexual partners, and increasing condom or contraceptive use among adolescents.
- Mothers have been identified as gatekeepers to CSE
- However, no identified studies have examined African immigrant mothers provision of CSE to their daughters in an effort to decrease rates of teen pregnancies and STIs.

Purpose

- To describe the attitudes and beliefs of African immigrant mothers towards providing comprehensive sex education to daughters' ages 12-17 years.
- To describe African immigrant mothers strategies to prevent teen pregnancy and STIs in their daughters.

Study Design

Descriptive, cross-sectional design

Convenience Sample

- Subscribers to the Union of African Communities list serv
- Local African businesses
- Attendees of the 2nd Annual African Diversity Festival
- **Inclusion criteria**
 - Mothers who identified as having been born in an African country
 - Mothers who identified as having a daughter between the ages of 12-17 years
- **Exclusion criteria**
 - Unable to read and write English

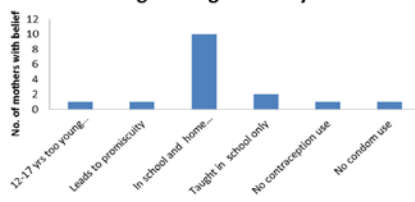
Procedures

- Subjects received the study survey either electronically or via paper form
- Study survey contained an introduction to study aims and a description of comprehensive sex education. Subjects who completed the survey electronically submitted information to an online database
- Subjects completing the paper form were asked to place and seal completed survey in an envelope, to preserve privacy and anonymity

Subjects

- 15 African immigrant mothers from eight African countries (Kenya, Nigeria, Congo, Zimbabwe, Zambia, Botswana, Ivory Coast, Guinea)
- Age Range- 20-50 years
- Most (33%) participants were between the ages of 41-45
- 86% of participants had post secondary education, 46% mothers with post secondary education had 2yr college degrees

Mothers' beliefs about providing CSE to daughters ages 12-17 years



Mothers' perceived change of sexual activity in daughter due to CSE



Limitations

- Small sample of primarily well educated African mothers
- Variables such as income and marital status- that may contribute to changes in attitudes and beliefs, were not examined
- Survey lack evidence of validity and reliability

Conclusions

- Most mothers were receptive to teaching CSE or have it taught in schools
- To prevent teen pregnancy and STI, mother would teach CSE, provide access to contraceptives, provide religious instruction or send daughter back to Africa.
- It is not know if mothers actually provide CSE, at what age it is provided and content of teaching

Implications for Future research

- More information is needed on the knowledge immigrant African mothers have of comprehensive sex education components i.e. menstrual cycle, birth control methods and adolescent development, for those who are providing daughters with CSE.

APPENDIX L

ETHICAL CONCERNS POSTER

Ethical Concerns: Recruiting African Immigrant Mothers in the Community to discuss Reproductive Health Communication with their Daughters ages 10-14 years



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Background

- There are 1.7 million documented African immigrants living in the U.S.
- One of the fastest growing immigrant populations
- Most African immigrants in the U.S. are from five African countries: Ghana, Nigeria, Kenya, Ethiopia and Egypt
- Over 4,000 African immigrants in Pittsburgh
- There is scant research on African immigrants living in the United States.
- Ongoing PI's study seeks to describe the experiences of African immigrant mothers around providing reproductive health education to their daughters ages 10-14 years.
- Several ethical concerns associated with the study have been identified.

Study Design

Descriptive, cross-sectional design

Sample

Convenience sample recruited from churches and local African organizations and businesses

Inclusion criteria

- Mothers born in an African country
- Parenting a daughter 10-14 years old

Exclusion criteria

- Unable to read, write or speak English

Procedures

- Verbal informed consent obtained during first visit
- Demographic survey and interview completed
- Interviews are recorded and transcribed verbatim
- Clarification interview- a few weeks later
- Study compensation-\$30

Study Participants

- Nine immigrant mothers from four African countries (Kenya, Nigeria, Zambia, Sudan)
- Average age -35 years
- 78% are married
- 100% have a post high school education



Ethical Concerns

- Fear of joining studies due to immigration status
- Understanding of informed consent
- Autonomy-due to desire to 'help'
- Study compensation using WePay™ cards

Conclusions

- There are concerns regarding autonomy and informed consent in recruiting from the African immigrant population.
- Immigration status in the country is of great concern to participants.
- Varied approaches are being implemented to overcome these issues.
- Varied approaches include:
 - collection of minimal personal identifiers
 - use of 'man on the street approach'
 - teach communities how to be engaged in research
- *Study is ongoing*

Implications for Future Research

- Cultural context must be considered when planning studies in the African immigrant population.
- Community needs greater education and involvement in research.

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